

10/804157

\*\*\*\*\* INVENTOR RESULTS \*\*\*\*\*

=> d his 151

(FILE 'HCAPLUS' ENTERED AT 15:29:44 ON 29 AUG 2007)

L51 12 S L50 NOT L39

=> d que 151

L1 1 SEA FILE=HCAPLUS ABB=ON PLU=ON US20040175447/PN  
L2 23 SEA FILE=REGISTRY ABB=ON PLU=ON (4373-41-5/BI OR 472-15-1/BI  
OR 473-98-3/BI OR 545-46-0/BI OR 545-48-2/BI OR 77-52-1/BI OR  
110-54-3/BI OR 1406-18-4/BI OR 14265-44-2/BI OR 1721-69-3/BI  
OR 189384-88-1/BI OR 1896-77-1/BI OR 25089-87-6/BI OR 364062-05  
-5/BI OR 364062-06-6/BI OR 364062-07-7/BI OR 50-81-7/BI OR  
6089-92-5/BI OR 64-17-5/BI OR 68-04-2/BI OR 7664-38-2/BI OR  
77-92-9/BI OR 86176-79-6/BI)  
L3 QUE ABB=ON PLU=ON TRITERPENE#  
L4 QUE ABB=ON PLU=ON PENTACYCLIC TRITERPENE#  
L5 QUE ABB=ON PLU=ON MASLINIC ACID OR URSOLIC ACID  
L6 QUE ABB=ON PLU=ON PREVENT? OR REDUC? OR INHIBIT? OR BL  
OCK? OR STOP?  
L7 QUE ABB=ON PLU=ON MELANIN  
L8 QUE ABB=ON PLU=ON MELANIN (2A) PRODUCING OR PRODUCTION  
OR FORMULAT?  
L9 QUE ABB=ON PLU=ON BLACKEN? OR BROWNING?  
L11 QUE ABB=ON PLU=ON FEED# OR FERTILIZER#  
L12 QUE ABB=ON PLU=ON FOOD PRESERV?  
L16 QUE ABB=ON PLU=ON AY<2003 OR PY<2003 OR PRY<2003  
L19 1876 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (P) L7  
L21 607673 SEA FILE=HCAPLUS ABB=ON PLU=ON 17/SX,SC  
L22 99 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 AND L21  
L23 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L22 AND L11  
L25 15934 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L4 OR L5)  
L26 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L19  
L28 1654 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (L) L9  
L29 449 SEA FILE=HCAPLUS ABB=ON PLU=ON ((L2 OR L3 OR L4 OR L5)) AND  
L28  
L30 353 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L21  
L31 48 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (P) (L11 OR L12)  
L32 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 (P) (L7 OR L8)  
L33 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 (L) (L7 OR L8)  
L35 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 OR L26 OR L33  
L36 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND L16  
L37 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L12  
L38 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L21  
L39 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 OR L38  
L40 7 SEA FILE=HCAPLUS ABB=ON PLU=ON MURANO YOSHIHIRO/AU  
L41 11 SEA FILE=HCAPLUS ABB=ON PLU=ON SHINOHARA GOU/AU  
L42 19 SEA FILE=HCAPLUS ABB=ON PLU=ON KUNO NORIYASU/AU  
L43 26 SEA FILE=HCAPLUS ABB=ON PLU=ON (L40 OR L41 OR L42)  
L44 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND (L41 OR L42)  
L45 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND L42  
L46 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 OR L45  
L47 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 AND L21  
L48 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 AND (L11 OR L12)  
L49 13 SEA FILE=HCAPLUS ABB=ON PLU=ON (L46 OR L47 OR L48)  
L50 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 NOT L1  
L51 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L50 NOT L39

=> d his 164

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(FILE 'JAPIO' ENTERED AT 15:45:47 ON 29 AUG 2007)

L64 1 S L59 OR L62

=> d que l64

L6 QUE ABB=ON PLU=ON PREVENT? OR REDUC? OR INHIBIT? OR BLOCK? OR STOP?

L7 QUE ABB=ON PLU=ON MELANIN

L19 1876 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (P) L7

L40 7 SEA FILE=HCAPLUS ABB=ON PLU=ON MURANO YOSHIHIRO/AU

L41 11 SEA FILE=HCAPLUS ABB=ON PLU=ON SHINOHARA GOU/AU

L42 19 SEA FILE=HCAPLUS ABB=ON PLU=ON KUNO NORIYASU/AU

L57 42 SEA FILE=JAPIO ABB=ON PLU=ON (L40 OR L41 OR L42)

L59 1 SEA FILE=JAPIO ABB=ON PLU=ON L57 AND L7

L62 1 SEA FILE=JAPIO ABB=ON PLU=ON L19 AND L57

L64 1 SEA FILE=JAPIO ABB=ON PLU=ON L59 OR L62

=> d his l89

(FILE 'AGRICOLA, CABA, BIOSIS, SCISEARCH, PASCAL' ENTERED AT 16:17:13 ON 29 AUG 2007)

L89 3 S L87 OR L88

SAVE L89 HOF157MULTIN/A

FILE 'STNGUIDE' ENTERED AT 16:28:02 ON 29 AUG 2007

=> d que l89

L40 7 SEA FILE=HCAPLUS ABB=ON PLU=ON MURANO YOSHIHIRO/AU

L41 11 SEA FILE=HCAPLUS ABB=ON PLU=ON SHINOHARA GOU/AU

L42 19 SEA FILE=HCAPLUS ABB=ON PLU=ON KUNO NORIYASU/AU

L43 26 SEA FILE=HCAPLUS ABB=ON PLU=ON (L40 OR L41 OR L42)

L44 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND (L41 OR L42)

L45 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND L42

L46 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 OR L45

L87 3 SEA L43

L88 1 SEA L46

L89 3 SEA L87 OR L88

=> dup rem l51 l64 l89

FILE 'HCAPLUS' ENTERED AT 16:29:49 ON 29 AUG 2007

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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE 'JAPIO' ENTERED AT 16:29:49 ON 29 AUG 2007

COPYRIGHT (C) 2007 Japanese Patent Office (JPO) - JAPIO

FILE 'BIOSIS' ENTERED AT 16:29:49 ON 29 AUG 2007

Copyright (c) 2007 The Thomson Corporation

FILE 'PASCAL' ENTERED AT 16:29:49 ON 29 AUG 2007

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PROCESSING COMPLETED FOR L51

PROCESSING COMPLETED FOR L64

PROCESSING COMPLETED FOR L89

10/804157

L90 16 DUP REM L51 L64 L89 (0 DUPLICATES REMOVED)  
ANSWERS '1-12' FROM FILE HCAPLUS  
ANSWER '13' FROM FILE JAPIO  
ANSWERS '14-15' FROM FILE BIOSIS  
ANSWER '16' FROM FILE PASCAL

=> d 1-16 ibib ab

L90 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:551385 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:106489  
TITLE: Apoptosis inductor containing maslinic acid,  
erythrodiol, uvaol, and betulin derivatives  
INVENTOR(S): Shinohara, Hisami; Shinohara, Gou;  
Kuno, Noriyasu  
PATENT ASSIGNEE(S): The Nisshin Oillio, Ltd., Japan  
SOURCE: PCT Int. Appl., 86 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003057224	A1	20030717	WO 2002-JP13663	20021226
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002367429	A1	20030724	AU 2002-367429	20021226
PRIORITY APPLN. INFO.:			JP 2001-401506	A 20011228
			WO 2002-JP13663	W 20021226

AB Disclosed are an apoptosis inductor containing as an active ingredient a compound having the effect of inducing apoptosis which is selected from the group consisting of maslinic acid, erythrodiol, uvaol, betulin, physiol. acceptable salts of these, and derivs. of these; a food or beverage for apoptosis induction; a material therefor; and a pharmaceutical preparation containing the apoptosis inductor. Maslinic acid was extracted from olive, and its apoptosis inducing effect in rat vascular smooth muscle cells (A7r5) was examined Also, a tablet containing the maslinic acid 250, corn starch 14.5, crystalline cellulose 25, CM-cellulose calcium 10.5 mg was prepared  
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:376976 HCAPLUS Full-text  
DOCUMENT NUMBER: 138:384533  
TITLE: Fats and oils rich in linear isoprenoid fatty acid  
esters and processes for production thereof  
INVENTOR(S): Shinohara, Gou; Satou, Chiemi; Shirasawa,  
Seiichi  
PATENT ASSIGNEE(S): The Nisshin Oillio, Ltd., Japan  
SOURCE: PCT Int. Appl., 36 pp.

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CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003040275	A1	20030515	WO 2002-JP11607	20021107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002344480	A1	20030519	AU 2002-344480	20021107
PRIORITY APPLN. INFO.:			JP 2001-342501	A 20011107
			WO 2002-JP11607	W 20021107

AB The title esters are prepared from linear isoprenoid alcs. and fatty acids, fatty acid Me esters, Et esters, glycerides, or an oil or fat containing these substances in the presence of carboxylic ester hydrolases. Thus, 1000 g purified soybean oil, 0.1 g geranylgeraniol, and 1% Novozyme were stirred at 60° for 3 h to give an oil containing 0.0187% geranylgeranyl ester.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:376529 HCAPLUS Full-text  
 DOCUMENT NUMBER: 138:367942  
 TITLE: Antiobesity foods and drinks  
 INVENTOR(S): Shinohara, Hisami; Shinohara, Gou;  
 Kuno, Noriyasu  
 PATENT ASSIGNEE(S): The Nisshin Oillio, Ltd., Japan  
 SOURCE: PCT Int. Appl., 97 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039270	A1	20030515	WO 2002-JP11608	20021107
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002344481	A1	20030519	AU 2002-344481	20021107
PRIORITY APPLN. INFO.:			JP 2001-343917	A 20011108
			WO 2002-JP11608	W 20021107

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AB Antiobesity foods and drinks contain compds. selected from pentacyclic triterpenes, physiol. acceptable salts thereof and derivs. The pentacyclic triterpenes are selected from maslinic acid, erythrodiol, ursolic acid, uvaol, betulinic acid, and betulin and their derivative and salts.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:282683 HCAPLUS Full-text  
 DOCUMENT NUMBER: 138:305769  
 TITLE: Process for producing fat compositions containing oleanolic acid and/or maslinic acid  
 INVENTOR(S): Kuno, Noriyasu; Shinohara, Gou  
 PATENT ASSIGNEE(S): The Nisshin Oillio, Ltd., Japan  
 SOURCE: PCT Int. Appl., 38 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003029391	A1	20030410	WO 2002-JP10101	20020927
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002338111	A1	20030414	AU 2002-338111	20020927
EP 1431379	A1	20040623	EP 2002-772941	20020927
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
CN 1558942	A	20041229	CN 2002-818974	20020927
US 2004185157	A1	20040923	US 2004-809849	20040326
PRIORITY APPLN. INFO.:			JP 2001-304731	A 20010928
			WO 2002-JP10101	W 20020927

AB Provided is a process for industrially and efficiently producing fat compns. containing oleanolic acid, maslinic acid, physiol. acceptable salts thereof and derivs. of the same. This process involves the step of extracting olive plant and/or byproducts obtained during the production of olive oil with an organic solvent optionally containing water. The compns. are useful for food, cosmetic or pharmaceutical uses (no data).

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:117604 HCAPLUS Full-text  
 DOCUMENT NUMBER: 138:175849  
 TITLE: Antiobesity drugs containing triterpene derivs. as inhibitor of adipocyte proliferation and differentiation  
 INVENTOR(S): Shinohara, Hisami; Shinohara, Gou; Kuno, Noriyasu  
 PATENT ASSIGNEE(S): The Nisshin Oillio, Ltd., Japan

10/804157

SOURCE: PCT Int. Appl., 98 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011267	A1	20030213	WO 2002-JP7709	20020730
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

AU 2002355696 A1 20030217 AU 2002-355696 20020730  
 PRIORITY APPLN. INFO.: JP 2001-232037 A 20010731  
 WO 2002-JP7709 W 20020730

AB Antiobesity drugs containing, as the active ingredient, one or more members selected from among maslinic acid, erythrodilol, ursolic acid, uvaol, betulinic acid, betulin, physiol. acceptable salts thereof and derivs. of the same which have antiobesity effects of, for example, inhibiting the proliferation and differentiation of adipocyte precursors and inhibiting fat accumulation.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:777615 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:262253  
 TITLE: Food or beverage for vascular disorders or diseases  
 INVENTOR(S): Shinohara, Hisami; Shinohara, Go; Kuno, Noriyasu  
 PATENT ASSIGNEE(S): The Nisshin Oil Mills, Ltd., Japan  
 SOURCE: PCT Int. Appl., 101 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002078468	A1	20021010	WO 2002-JP3188	20020329
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

AU 2002241334 A1 20021015 AU 2002-241334 20020329  
 PRIORITY APPLN. INFO.: JP 2001-101820 A 20010330  
 JP 2001-342541 A 20011107

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WO 2002-JP3188

W 20020329

AB A health food or beverage for control of vascular disorders or diseases is given. The health food or beverage contains the active ingredient pentacyclic triterpenes (I) such as malsinic acid, physiol. acceptable salts of I, and derivs. of I. The health food or beverage is useful for control of vascular disorders such as atherosclerosis.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:521383 HCAPLUS Full-text

DOCUMENT NUMBER: 137:62524

TITLE: Antitumor food or beverage

INVENTOR(S): Shinohara, Go; Kuno, Noriyasu; Inui, Toshiyuki

PATENT ASSIGNEE(S): The Nisshin Oil Mills, Ltd., Japan

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002052956	A1	20020711	WO 2001-JP11374	20011225
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002216411	A1	20020716	AU 2002-216411	20011225
PRIORITY APPLN. INFO.:			JP 2000-398899	A 20001227
			WO 2001-JP11374	W 20011225

AB An antitumor food or beverage which contains as the active ingredient a compound selected among pentacyclic triterpenes, i.e. maslinic acid, erythrodilol, ursolic acid, uvaol, betulinic acid, and betulin, their physiol. acceptable salts and derivs. These antitumor food and beverage are useful for control and inhibit of tumor growth and metastasis. These antitumor agents can be isolated from olive defatted lees by ethanol extraction and chromatog.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:428718 HCAPLUS Full-text

DOCUMENT NUMBER: 136:401036

TITLE: Beautifying foods and drinks and peroral beautifying preparations

INVENTOR(S): Shinohara, Gou; Kuno, Noriyasu

PATENT ASSIGNEE(S): The Nisshin Oil Mills, Ltd., Japan

SOURCE: PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002043736	A1	20020606	WO 2001-JP10514	20011130
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2430346	A1	20020606	CA 2001-2430346	20011130
AU 2002024130	A5	20020611	AU 2002-24130	20011130
EP 1340501	A1	20030903	EP 2001-998197	20011130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004086553	A1	20040506	US 2003-445943	20030528
PRIORITY APPLN. INFO.:			JP 2000-366139	A 20001130
			WO 2001-JP10514	W 20011130

AB Foods and drinks contain  $\geq 1$  pentacyclic triterpenes and their physiol. acceptable salts thereof, and their derivs. are useful for prevention of melanin formation and deposition. The pentacyclic triterpenes are selected especially from maslinic acid, erythrodiol, ursolic acid, uvaol, betulinic acid, and betulin. The foods and drinks are useful for skin care.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:122929 HCAPLUS Full-text  
 DOCUMENT NUMBER: 136:164276  
 TITLE: Process for producing oleanolic acid and maslinic acid  
 INVENTOR(S): Kuno, Noriyasu; Shinohara, Gou  
 PATENT ASSIGNEE(S): The Nisshin Oil Mills, Ltd., Japan  
 SOURCE: PCT Int. Appl., 46 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012159	A1	20020214	WO 2001-JP2788	20010330
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001044683	A5	20020218	AU 2001-44683	20010330
CA 2419041	A1	20030210	CA 2001-2419041	20010330
EP 1310478	A1	20030514	EP 2001-917727	20010330
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003171613	A1	20030911	US 2003-359586	20030207



10/804157

US 6740778 B2 20040525  
 PRIORITY APPLN. INFO.: JP 2000-240347 A 20000808  
 WO 2001-JP2788 W 20010330

AB This document discloses a process for producing oleanolic acid and maslinic acid and physiol. acceptable salts thereof characterized by extracting (with water and/or an organic solvent) olive plant and/or products formed in the course of the production of olive oil and then concentrating and/or fractionating and purifying. Pure oleanolic acid and maslinic acid were obtained.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:107121 HCAPLUS Full-text  
 DOCUMENT NUMBER: 136:145219  
 TITLE: Antitumor agents  
 INVENTOR(S): Kuno, Noriyasu; Shinohara, Gou;  
 Inui, Tosiya  
 PATENT ASSIGNEE(S): The Nisshin Oil Mills, Ltd., Japan  
 SOURCE: PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002009719	A1	20020207	WO 2001-JP6393	20010725
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002024595	A5	20020213	AU 2002-24595	20010725
CA 2418117	A1	20030130	CA 2001-2418117	20010725
EP 1321145	A1	20030625	EP 2001-984400	20010725
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
US 2003153538	A1	20030814	US 2003-355201	20030131
PRIORITY APPLN. INFO.:			JP 2000-230254	A 20000731
			JP 2000-366297	A 20001130
			WO 2001-JP6393	W 20010725

AB Antitumor agents comprising as the active ingredient a compound selected from among maslinic acid, erythrodiol, uvaol, betulinic acid, betulin, physiol. acceptable salts thereof and derivs. thereof.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:730516 HCAPLUS Full-text  
 DOCUMENT NUMBER: 135:277748  
 TITLE: External preparation for the skin and beautifying agents  
 INVENTOR(S): Kuno, Noriyasu; Shinohara, Gou  
 PATENT ASSIGNEE(S): The Nisshin Oil Mills, Ltd., Japan

10/804157

SOURCE: PCT Int. Appl., 92 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001072265	A1	20011004	WO 2001-JP2787	20010330
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2404012	A1	20011004	CA 2001-2404012	20010330
AU 200144682	A	20011008	AU 2001-44682	20010330
AU 2001244682	A2	20011008	AU 2001-244682	20010330
EP 1295587	A1	20030326	EP 2001-917726	20010330
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 3958968	B2	20070815	JP 2001-570227	20010330
US 2003133958	A1	20030717	US 2002-259323	20020930
PRIORITY APPLN. INFO.:			JP 2000-97428	A 20000331
			JP 2000-258995	A 20000829
			JP 2000-403353	A 20001228
			WO 2001-JP2787	W 20010330

AB Disclosed is an external preparation for the skin containing one or more members selected from the group consisting of maslinic acid, erythrodiol, uvaol, betulinic acid, betulin, and physiol. acceptable salts and derivs. of these compds. Maslinic acid was obtained from exts. of olive. A cream was formulated containing beeswax 6, cetanol 5, reduced lanolin 5, squalane 30, glycerin monostearate 5, lipophilic glycerin monostearate 2, polyoxyethylene sorbitan monolaurate 2, purified maslinic acid 0.01, preservatives 0.2, perfumes q.s., and distilled water balance to 100 %. The cream showed excellent skin-lightening effects.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L90 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:568692 HCAPLUS Full-text

DOCUMENT NUMBER: 133:129814

TITLE: Inhibitory effect of sesame extracts on lipid peroxidation in rats

AUTHOR(S): Kojima, Keiichi; Kuno, Noriyasu; Kubota, Fumie; Shinohara, Gou; Takeuchi, Hiroyuki; Tsuji, Hiroaki; Seto, Akira

CORPORATE SOURCE: Research Laboratory, The Nissin Oil Mills, Ltd, Shinmei-cho, Yokosuka-shi, Kanagawa-ken, 239-0832), Japan

SOURCE: Nihon Yukagakkaishi (2000), 49(7), 707-712  
 CODEN: NIYUFC; ISSN: 1341-8327

PUBLISHER: Nihon Yukagaku Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB For clarification of the in vivo antioxidant effect of sesame exts. (rich in lignan glycosides) on lipid peroxidn., determination was made by thiobarbituric acid (TBA), phosphatidylcholine hydroperoxides (PCOOH) and hepatic activity of superoxide dismutase (EC 1.15.1.1; SOD). Male wistar rats were fed exptl. diets containing sesame exts. for 2 wk and killed 24 h after injection of diethyldithiocarbamic acid (DDC), an SOD inhibitor. Blood and livers were then collected and hepatic TBA was determined 24 h after DDC injection and the values were found significant. Hepatic TBA of rats fed sesame exts. was significantly less than that of DDC injected rats. PCOOH in rats fed sesame exts. was about half that of DDC injected rats. Sesame exts. (rich in lignan glycosides) would thus appear to protect lipids from peroxidn. in vivo.

L90 ANSWER 13 OF 16 JAPIO (C) 2007 JPO on STN

ACCESSION NUMBER: 2001-261570 JAPIO Full-text

TITLE: SKIN CARE PREPARATION

INVENTOR: KAMEYAMA HISAMI; NIIMOTO YUKIKO; SAKATA OSAMU;  
KUNO NORIYASU; SHINOHARA TAKESHI  
PATENT ASSIGNEE(S): NISSHIN OIL MILLS LTD:THE  
KOSE CORP

PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2001261570	A	20010926	Heisei	A61K035-78

APPLICATION INFORMATION

STN FORMAT: JP 2000-80999 20000322  
ORIGINAL: JP2000080999 Heisei  
PRIORITY APPLN. INFO.: JP 2000-80999 20000322  
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
Applications, Vol. 2001

AB PROBLEM TO BE SOLVED: To provide a skin care preparation having a high activity for inhibiting melanin formation, hardly being deteriorated in the preparation, capable of providing high medicinal virtues, and containing bleaching and skin-care components. SOLUTION: This skin care preparation contains a component (A) of an extract of seeds of *Linum usitatissimum* L., and a component (B) of a medicinal agent selected from the bleaching agent, an antioxidant and the like. The component (A) is produced by extracting the seeds of the *Linum usitatissimum* L. with water and/or a hydrophilic organic solvent (e.g. methyl alcohol, ethyl alcohol or the like). COPYRIGHT: (C)2001,JPO

L90 ANSWER 14 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:282949 BIOSIS Full-text

DOCUMENT NUMBER: PREV200400283509

TITLE: Method for the preparation of oleanolic acid and/or maslinic acid.

AUTHOR(S): Kuno, Noriyasu [Inventor, Reprint Author];  
Shinohara, Gou [Inventor]

CORPORATE SOURCE: Yokosuka, Japan  
ASSIGNEE: The Nisshin Oillio, Ltd., Tokyo, Japan

PATENT INFORMATION: US 6740778 20040525

SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (May 25 2004) Vol. 1282, No. 4.  
<http://www.uspto.gov/web/menu/patdata.html>. e-file.  
ISSN: 0098-1133 (ISSN print).

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 9 Jun 2004  
 Last Updated on STN: 9 Jun 2004

AB The present invention relates to a method for preparing oleanolic acid and/or maslinic acid and physiologically acceptable salts thereof, which comprises the steps of extracting olive plant and/or products obtained in the olive oil-manufacturing processes with water and/or an organic solvent and then concentrating and/or fractionating/purifying the resulting extract.

L90 ANSWER 15 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:128766 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV200400129620  
 TITLE: Skin-beautifying agent, anti-aging agent for the skin, whitening agent and external agent for the skin.  
 AUTHOR(S): Kuno, Noriyasu [Inventor, Reprint Author];  
 Matsumoto, Miho [Inventor]  
 CORPORATE SOURCE: Yokosuka, Japan  
 ASSIGNEE: The Nisshin Oil Mills, Ltd., Tokyo, Japan  
 PATENT INFORMATION: US 6682763 20040127  
 SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Jan 27 2004) Vol. 1278, No. 4.  
<http://www.uspto.gov/web/menu/patdata.html>. e-file.  
 ISSN: 0098-1133 (ISSN print).

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 3 Mar 2004  
 Last Updated on STN: 3 Mar 2004

AB The present invention relates to an external agent for the skin comprising an extract prepared from olive plants and also relates to an external agent for the skin comprising the extract as a skin-beautifying component, in particular, as an anti-aging component for the skin and/or a whitening component. The extract can be prepared by extracting olive plants and/or products generated during and after the olive oil-manufacturing processes with water and/or an organic solvent and further the extract can further be subjected to a concentration treatment and/or a fractionation- purification treatment to thus improve each effect. Moreover, the present invention also relates to a skin-beautifying agent, in particular, an anti-aging agent and a skin-whitening agent, containing the extract as an effective component.

L90 ANSWER 16 OF 16 PASCAL COPYRIGHT 2007 INIST-CNRS. ALL RIGHTS RESERVED. on STN

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\*\*\*\*\* QUERY RESULTS \*\*\*\*\*

=> d his 139

(FILE 'HCAPLUS' ENTERED AT 15:29:44 ON 29 AUG 2007)

L39 6 S L37 OR L38

=> d que 139

L2 23 SEA FILE=REGISTRY ABB=ON PLU=ON (4373-41-5/BI OR 472-15-1/BI  
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OR 189384-88-1/BI OR 1896-77-1/BI OR 25089-87-6/BI OR 364062-05  
-5/BI OR 364062-06-6/BI OR 364062-07-7/BI OR 50-81-7/BI OR  
6089-92-5/BI OR 64-17-5/BI OR 68-04-2/BI OR 7664-38-2/BI OR  
77-92-9/BI OR 86176-79-6/BI)  
L3 QUE ABB=ON PLU=ON TRITERPENE#  
L4 QUE ABB=ON PLU=ON PENTACYCLIC TRITERPENE#  
L5 QUE ABB=ON PLU=ON MASLINIC ACID OR URSOLIC ACID  
L6 QUE ABB=ON PLU=ON PREVENT? OR REDUC? OR INHIBIT? OR BL  
OCK? OR STOP?  
L7 QUE ABB=ON PLU=ON MELANIN  
L8 QUE ABB=ON PLU=ON MELANIN (2A) PRODUCING OR PRODUCTION  
OR FORMULAT?  
L9 QUE ABB=ON PLU=ON BLACKEN? OR BROWNING?  
L11 QUE ABB=ON PLU=ON FEED# OR FERTILIZER#  
L12 QUE ABB=ON PLU=ON FOOD PRESERV?  
L16 QUE ABB=ON PLU=ON AY<2003 OR PY<2003 OR PRY<2003  
L19 1876 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (P) L7  
L21 607673 SEA FILE=HCAPLUS ABB=ON PLU=ON 17/SX,SC  
L22 99 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 AND L21  
L23 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L22 AND L11  
L25 15934 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L4 OR L5)  
L26 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L19  
L28 1654 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (L) L9  
L29 449 SEA FILE=HCAPLUS ABB=ON PLU=ON ((L2 OR L3 OR L4 OR L5)) AND  
L28  
L30 353 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L21  
L31 48 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (P) (L11 OR L12)  
L32 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 (P) (L7 OR L8)  
L33 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 (L) (L7 OR L8)  
L35 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 OR L26 OR L33  
L36 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND L16  
L37 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L12  
L38 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND L21  
L39 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 OR L38

=> d his 156

(FILE 'JAPIO' ENTERED AT 15:42:34 ON 29 AUG 2007)

FILE 'STNGUIDE' ENTERED AT 15:44:59 ON 29 AUG 2007

FILE 'JAPIO' ENTERED AT 15:45:47 ON 29 AUG 2007

L56 1 S L55 AND (L11 OR L12)

=> d que 156

L3 QUE ABB=ON PLU=ON TRITERPENE#  
L6 QUE ABB=ON PLU=ON PREVENT? OR REDUC? OR INHIBIT? OR BL  
OCK? OR STOP?

# 10/804157

L7 QUE ABB=ON PLU=ON MELANIN  
 L8 QUE ABB=ON PLU=ON MELANIN (2A) PRODUCING OR PRODUCTION  
 OR FORMULAT?  
 L11 QUE ABB=ON PLU=ON FEED# OR FERTILIZER#  
 L12 QUE ABB=ON PLU=ON FOOD PRESERV?  
 L54 66 SEA FILE=JAPIO ABB=ON PLU=ON L3 (P) L6  
 L55 11 SEA FILE=JAPIO ABB=ON PLU=ON L54 AND (L7 OR L8)  
 L56 1 SEA FILE=JAPIO ABB=ON PLU=ON L55 AND (L11 OR L12)

=> d his 186

(FILE 'AGRICOLA, CABA, BIOSIS, SCISEARCH, PASCAL' ENTERED AT 16:17:13 ON  
 29 AUG 2007)

L86 32 S L82 AND (L8 OR L9 OR L10)

=> d que 186

L2 23 SEA FILE=REGISTRY ABB=ON PLU=ON (4373-41-5/BI OR 472-15-1/BI  
 OR 473-98-3/BI OR 545-46-0/BI OR 545-48-2/BI OR 77-52-1/BI OR  
 110-54-3/BI OR 1406-18-4/BI OR 14265-44-2/BI OR 1721-69-3/BI  
 OR 189384-88-1/BI OR 1896-77-1/BI OR 25089-87-6/BI OR 364062-05  
 -5/BI OR 364062-06-6/BI OR 364062-07-7/BI OR 50-81-7/BI OR  
 6089-92-5/BI OR 64-17-5/BI OR 68-04-2/BI OR 7664-38-2/BI OR  
 77-92-9/BI OR 86176-79-6/BI)  
 L3 QUE ABB=ON PLU=ON TRITERPENE#  
 L4 QUE ABB=ON PLU=ON PENTACYCLIC TRITERPENE#  
 L5 QUE ABB=ON PLU=ON MASLINIC ACID OR URSOLIC ACID  
 L6 QUE ABB=ON PLU=ON PREVENT? OR REDUC? OR INHIBIT? OR BL  
 OCK? OR STOP?  
 L7 QUE ABB=ON PLU=ON MELANIN  
 L8 QUE ABB=ON PLU=ON MELANIN (2A) PRODUCING OR PRODUCTION  
 OR FORMULAT?  
 L9 QUE ABB=ON PLU=ON BLACKEN? OR BROWNING?  
 L10 QUE ABB=ON PLU=ON (MELANOGENE? OR BLACKEN? OR BROWN?)  
 (2A) (INHIBIT? OR AGENT# OR FORMUL? OR COMPOSIT?)  
 L11 QUE ABB=ON PLU=ON FEED# OR FERTILIZER#  
 L12 QUE ABB=ON PLU=ON FOOD PRESERV?  
 L16 QUE ABB=ON PLU=ON AY<2003 OR PY<2003 OR PRY<2003  
 L28 1654 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (L) L9  
 L29 449 SEA FILE=HCAPLUS ABB=ON PLU=ON ((L2 OR L3 OR L4 OR L5)) AND  
 L28  
 L74 779 SEA L29  
 L75 62 SEA L74 AND (L11 OR L12)  
 L76 34 SEA L75 AND L16  
 L78 34 SEA L76 AND ((L7 OR L8 OR L9 OR L10))  
 L79 32 DUP REM L78 (2 DUPLICATES REMOVED)  
 L82 32 SEA L79 AND (PY<2005 OR AY<2005 OR PRY<2005)  
 L86 32 SEA L82 AND (L8 OR L9 OR L10)

=> dup rem 139 156 186

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 COPYRIGHT (C) 2007 Japanese Patent Office (JPO)- JAPIO

FILE 'AGRICOLA' ENTERED AT 16:31:55 ON 29 AUG 2007

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FILE 'CABA' ENTERED AT 16:31:55 ON 29 AUG 2007  
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FILE 'BIOSIS' ENTERED AT 16:31:55 ON 29 AUG 2007  
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PROCESSING COMPLETED FOR L39

PROCESSING COMPLETED FOR L56

PROCESSING COMPLETED FOR L86

L91 39 DUP REM L39 L56 L86 (0 DUPLICATES REMOVED)

ANSWERS '1-6' FROM FILE HCAPLUS

ANSWER '7' FROM FILE JAPIO

ANSWERS '8-15' FROM FILE AGRICOLA

ANSWERS '16-26' FROM FILE CABA

ANSWERS '27-39' FROM FILE BIOSIS

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L91 ANSWER 1 OF 39 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:282289 HCAPLUS Full-text

DOCUMENT NUMBER: 138:270664

TITLE: Feeds and fertilizers containing  
pentacyclic triterpenes

INVENTOR(S): Murano, Yoshihiro; Shinohara, Gou; Kuno, Noriyasu

PATENT ASSIGNEE(S): The Nisshin Oillio, Ltd., Japan

SOURCE: PCT Int. Appl., 103 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003028475	A1	20030410	WO 2002-JP10102	20020927 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002343927	A1	20030414	AU 2002-343927	20020927 <--
EP 1430787	A1	20040623	EP 2002-775253	20020927 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
CN 1558722	A	20041229	CN 2002-818976	20020927 <--
US 2004175447	A1	20040909	US 2004-804157	20040319 <--
PRIORITY APPLN. INFO.:			JP 2001-304708	A 20010928 <--
			WO 2002-JP10102	W 20020927 <--

ED Entered STN: 11 Apr 2003

AB The pentacyclic triterpenes such as maslinic acid, and their salts and derivs. are used for manufacturing feeds, fertilizers, melanin-formation and/or blackening/browning inhibitors for animals and plants. The pentacyclic triterpenes are selected from oleanane, ursane, and lupane triterpenes.

IC ICM A23K001-16

ICS C05G003-00; A23L001-30

- CC 17-6 (Food and Feed Chemistry)  
Section cross-reference(s): 19
- ST pentacyclic triterpene feed  
fertilizer melanin formation inhibitor;  
browning inhibitor pentacyclic  
triterpene
- IT Gallus domesticus  
(broiler; feeds and fertilizers containing  
pentacyclic triterpenes for inhibition of  
browning and melanin formation)
- IT Discoloration prevention  
(browning; feeds and fertilizers containing  
pentacyclic triterpenes for inhibition of  
browning and melanin formation)
- IT Antioxidants  
Bos taurus  
Feed  
Food preservation  
Malus pumila  
Olea europaea  
Pagrus major  
Prawn  
Solanum melongena  
Sus scrofa domestica  
(feeds and fertilizers containing pentacyclic  
triterpenes for inhibition of browning and  
melanin formation)
- IT Fertilizers  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(feeds and fertilizers containing pentacyclic  
triterpenes for inhibition of browning and  
melanin formation)
- IT Carboxylic acids, biological studies  
Minerals, biological studies  
RL: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological  
study); USES (Uses)  
(feeds and fertilizers containing pentacyclic  
triterpenes for inhibition of browning and  
melanin formation)
- IT Melanins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(feeds and fertilizers containing pentacyclic  
triterpenes for inhibition of browning and  
melanin formation)
- IT Flavones  
RL: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological  
study); USES (Uses)  
(isoflavones; feeds and fertilizers containing  
pentacyclic triterpenes for inhibition of  
browning and melanin formation)
- IT Solvents  
(organic; feeds and fertilizers containing  
pentacyclic triterpenes for inhibition of  
browning and melanin formation)
- IT Triterpenes  
RL: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological  
study); USES (Uses)  
(pentacyclic; feeds and fertilizers containing  
pentacyclic triterpenes for inhibition of  
browning and melanin formation)



- IT Browning (food)  
(prevention; feeds and fertilizers containing pentacyclic triterpenes for inhibition of browning and melanin formation)
- IT Carboxylic acids, biological studies  
RL: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(salts; feeds and fertilizers containing pentacyclic triterpenes for inhibition of browning and melanin formation)
- IT 50-81-7, Vitamin C, biological studies 77-52-1, Ursolic acid 77-52-1D, Ursolic acid, derivs. 77-52-1D, Ursolic acid, salts 472-15-1, Betulinic acid 472-15-1D, Betulinic acid, derivs. 472-15-1D, Betulinic acid, salts 473-98-3, Betulin 473-98-3D, Betulin, derivs. 473-98-3D, Betulin, salts 545-46-0, Uvaol 545-46-0D, Uvaol, derivs. 545-46-0D, Uvaol, salts 545-48-2, Erythrodiol 545-48-2D, Erythrodiol, derivs. 545-48-2D, Erythrodiol, salts 1406-18-4, Vitamin E 4373-41-5, Maslinic acid 4373-41-5D, Maslinic acid, derivs. 4373-41-5D, Maslinic acid, salts 7664-38-2, Phosphoric acid, biological studies 14265-44-2, Phosphate, biological studies  
RL: AGR (Agricultural use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(feeds and fertilizers containing pentacyclic triterpenes for inhibition of browning and melanin formation)
- IT 1721-69-3P, Betulin 3,28-diacetate 1896-77-1P, Erythrodiol 3,28-diacetate 6089-92-5P, 2,3-O-Diacetyl-maslinic acid 25089-87-6P, 3,28-O-Diacetyl-uvaol 86176-79-6P, Ethyl ursolate 189384-88-1P, Ethyl betulinic acid 364062-05-5P, Ethyl maslinic acid 364062-06-6P 364062-07-7P, 2,3-O-Di-stearoylmaslinic acid ethyl ester  
RL: AGR (Agricultural use); FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(feeds and fertilizers containing pentacyclic triterpenes for inhibition of browning and melanin formation)
- IT 68-04-2, Sodium citrate 77-92-9, Citric acid, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(feeds and fertilizers containing pentacyclic triterpenes for inhibition of browning and melanin formation)
- IT 64-17-5, Ethanol, biological studies 110-54-3, Hexane, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(feeds and fertilizers containing pentacyclic triterpenes for inhibition of browning and melanin formation)
- REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L91 ANSWER 2 OF 39 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:889444 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:61235  
 TITLE: Highly stable ascorbic acid derivative compositions

10/804157

INVENTOR(S): Ito, Shinobu  
 PATENT ASSIGNEE(S): Showa Denko K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000351905	A	20001219	JP 2000-99167	20000331 <--
PRIORITY APPLN. INFO.:			JP 1999-98119	A 19990405 <--

OTHER SOURCE(S): MARPAT 134:61235

ED Entered STN: 19 Dec 2000

AB The compns., useful as drugs, quasi-drugs, cosmetics, detergents, food, feed, etc., except those for iontophoresis, comprise alkaline ion water and  $\geq 1$  selected from ascorbic acid derivs. I (R1-R4 = OH or inorg. or organic ester, glycoside, ketal, or acetal of the OH; R1 and/or R2 = group other than OH) and their salts. A cosmetic lotion containing EtOH 40.0, propylene glycol 10.0, poly(Na acrylate) 3.0, carrageenan 0.01, xanthan gum 0.01, 1,3-butylene glycol 3.0, castor oil 5.0, L-ascorbic acid phosphate Na salt (II) 3.0, paraben 0.1%, and alkaline ion water balance was autoclaved at 121° for 20 min to show slight change in the content of II.

IC ICM C08L101-14

ICS A23K001-16; A23L001-302; A61K007-00; A61K007-02; A61K007-027; A61K007-06; A61K007-075; A61K007-08; A61K007-50; A61K031-365; A61K031-665; A61K033-00; A61P003-02; A61P017-00; A61P017-02; C08K005-1535; C11D003-20

CC 62-4 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 17, 63

IT Hair preparations  
 (conditioners; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

IT Cosmetics  
 (creams; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

IT Radicals, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (diseases due to, treatment of; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

IT Melanins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (formation inhibitors; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

IT Cosmetics  
 (gels; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

IT Hair preparations  
 (growth stimulants; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

IT Beverages  
 (health; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)

- feed)
- IT Allergy inhibitors  
Bath preparations  
Cosmetics  
Detergents  
Drugs  
Feed additives  
Food additives  
Reducing agents  
Shampoos  
Wound healing promoters  
(highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed  
)
- IT Cosmetics  
(liqs.; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Cosmetics  
(lotions; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Cosmetics  
(packs; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Skin, disease  
(pigmentation, treatment of; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Cosmetics  
(powders; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Cosmetics  
(skin-lightening; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed).
- IT Drug delivery systems  
(solns., ophthalmic; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Cosmetics  
(sprays; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Drug delivery systems  
(topical, patch; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT Acne  
(treatment of; highly stable compns. of ascorbic acid derivs. using alkaline ion water as medium for drugs and cosmetics and detergents and food and feed)
- IT 137-66-6, Ascorbic acid 6-palmitate 4218-81-9, Ascorbic acid 2,6-dipalmitate 10605-09-1, Ascorbic acid 6-stearate 84309-23-9, Ascorbic acid 2-phosphate magnesium salt 105256-49-3 128808-26-4, L-Ascorbic acid phosphate sodium salt 129499-78-1 215363-36-3 244158-48-3 287925-63-7 287925-69-3 313220-18-7  
RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)  
 (highly stable compns. of ascorbic acid derivs. using alkaline ion water as  
 medium for drugs and cosmetics and detergents and food and feed  
 )

L91 ANSWER 3 OF 39 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2000:611878 HCAPLUS Full-text  
 DOCUMENT NUMBER: 133:192420  
 TITLE: Miso or miso products and its production  
 method  
 INVENTOR(S): Kida, Takao; Kasai, Hiroshi  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000236834	A	20000905	JP 1999-43094	19990222 <--
PRIORITY APPLN. INFO.:			JP 1999-43094	19990222 <--
ED Entered STN: 05 Sep 2000				
AB	The invention relates to a miso or a miso product containing a sulfur-containing compound, e.g. glutathione, cysteine, and cystine, etc., or an enediol compound, e.g. ascorbate and erythorbate, etc., as an additive, wherein the use of the additive prevents browning of the miso during storage.			
IC	ICM A23L001-202 ICS A23L003-00; A23L003-3526; A23L003-3544			
CC	17-6 (Food and Feed Chemistry)			
ST	miso browning prevention sulfur compd; ascorbate erythorbate miso browning prevention			
IT	Discoloration prevention (browning; miso or miso products containing sulfur-containing compds. or enediol compds. for prevention of browning)			
IT	Packaging materials (films, gas-impermeable; miso or miso products containing sulfur-containing compds. or enediol compds. packaged with gas-barrier film for prevention of browning)			
IT	Yeast (glutathione-containing; miso or miso products containing sulfur-containing compds. or enediol compds. for prevention of browning)			
IT	Food preservatives Miso (miso or miso products containing sulfur-containing compds. or enediol compds. for prevention of browning)			
IT	Food packaging materials (miso or miso products containing sulfur-containing compds. or enediol compds. packaged with gas-barrier film for prevention of browning)			
IT	Polyesters, biological studies RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (miso or miso products containing sulfur-containing compds. or enediol compds. packaged with gas-barrier film for prevention of browning)			

IT Browning (food)  
 (prevention; miso or miso products containing sulfur-containing  
 compds. or enediol compds. for prevention of browning  
 )

IT 50-81-7, L-Ascorbic acid, biological studies 52-90-4, Cystein,  
 biological studies 56-89-3, Cystine, biological studies 70-18-8,  
 Glutathione, biological studies 89-65-6, Erythorbic acid 134-03-2,  
 Sodium ascorbate 5743-27-1, Calcium ascorbate 6381-77-7, Sodium  
 erythorbate 7757-83-7, Sodium sulfite  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (miso or miso products containing sulfur-containing compds. or enediol  
 compds.  
 for prevention of browning)

IT 25038-59-9, PET, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (miso or miso products containing sulfur-containing compds. or enediol  
 compds.  
 packaged with gas-barrier film for prevention of  
 browning)

L91 ANSWER 4 OF 39 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:201528 HCAPLUS Full-text

DOCUMENT NUMBER: 130:236769

TITLE: Feed for controlling melanin deposition in  
 muscles of fish in farming

INVENTOR(S): Nishishima, Kunihide; Kataoka, Katsuyuki

PATENT ASSIGNEE(S): Kohjin Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11075713	A	19990323	JP 1997-265105	19970912 <--
PRIORITY APPLN. INFO.:			JP 1997-265105	19970912 <--

ED Entered STN: 30 Mar 1999

AB A feed providing kojic acid at 1-100 mg/kg fish body weight per day is  
 effective in preventing melanin deposition in muscles of black sea bream  
 (Chrysophrys major), Fugu rubripes, flounder (Paralichthys olivaceus), etc.

IC ICM A23K001-16

ICS A23K001-18

CC 17-12 (Food and Feed Chemistry)

ST feed kojic acid muscle melanin inhibition

IT Chrysophrys major

Fish

Fugu rubripes

Paralichthys olivaceus

(feed for controlling melanin deposition in muscles of fish  
 in farming)

IT Melanins

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(feed for controlling melanin deposition in muscles of fish  
 in farming)

IT Feed

(for controlling melanin deposition in muscles of fish in farming)

IT 501-30-4, Kojic acid

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)  
 (in feed for controlling melanin deposition in muscles of  
 fish in farming)

L91 ANSWER 5 OF 39 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1991:428015 HCAPLUS Full-text  
 DOCUMENT NUMBER: 115:28015  
 TITLE: Kojic acid or its derivatives in fish food for  
 improving color of Pagrus major  
 INVENTOR(S): Kogasaki, Keiichi  
 PATENT ASSIGNEE(S): Shimakyu Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03043048	A	19910225	JP 1989-178721	19890711 <--
PRIORITY APPLN. INFO.:			JP 1989-178721	19890711 <--
ED Entered STN: 27 Jul 1991				
AB Fish feed containing kojic acid (I) or salt or ester is used to improve body color of P. major. I inhibits the formation of dopa and dopaquinone, intermediates in biosynthesis of melanins from tyrosine. Thus, I inhibits the deposit of melanins on the body surface of the fish. P. major were feeded with/without I for 100 days. The P. major received I 20.0 mg/day had .apprx.17 fold less of melanins deposited on fish surface, and the body weight of the fish was comparable to that of the controlled fish. Moreover, the meat of fish received I had comparable taste as that of controlled fish.				
IC ICM A23K001-18				
ICS A23K001-16				
CC 17-12 (Food and Feed Chemistry)				
ST kojic acid Pagrus color improvement; melanin inhibition kojic acid fish feed				
IT Chrysophrys major (feed, kojic acid in, for body color improvement)				
IT Feed (Pagrus major, kojic acid in, for body color improvement)				
IT 501-30-4, Kojic acid 501-30-4D, Kojic acid, esters 501-30-4D, Kojic acid, salts				
RL: BIOL (Biological study) (feed for Pagrus major containing, for body color improvement)				
IT 25552-08-3 123531-57-7				
RL: BIOL (Biological study) (Pagrus major feed containing, for body color improvement)				

L91 ANSWER 6 OF 39 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1989:438142 HCAPLUS Full-text  
 DOCUMENT NUMBER: 111:38142  
 TITLE: Metal and anionic macromolecular binding capacity and hair depigmentation in mink by Vantocil 1B, a biguanidine polymer  
 AUTHOR(S): Bluemenkrantz, Nelly; Hillemann, Georg  
 CORPORATE SOURCE: Natl. Inst. Anim. Sci., Hilleroed, DK-3400, Den.  
 SOURCE: Acta Agriculturae Scandinavica (1989), 39(2), 217-27  
 CODEN: AASCAU; ISSN: 0001-5121  
 DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 05 Aug 1989

AB Minks receiving a diet supplemented with a biguanidine polymer, Vantocil 1B, as antiviral-antibacterial agent and whose dams received the same diets during gestation and lactation, showed depigmentation of the underfur. Vantocil 1B dissolved melanin and was able to chelate Cu, Fe, and Zn ions, the 2 former being required for melanogenesis. Possible sites of interference with melanogenesis are discussed. The additive, a cationic compound, is shown to bind with anionic polymers, i.e. DNA, RNA, and glycosaminoglycans. Possible in vivo influence of this binding on biosynthesis of proteins and connective tissue components is discussed.

CC 17-5 (Food and Feed Chemistry)  
Section cross-reference(s): 1, 18

ST Vantocil 1B feed mink hair pigment; melanin mink hair  
feed Vantocil

IT Melanins

RL: FORM (Formation, nonpreparative)  
(formation of, in mink, dietary Vantocil 1B inhibition of)

=&gt; d 7-39 ibib ab hitind

L91 ANSWER 7 OF 39 JAPIO (C) 2007 JPO on STN

ACCESSION NUMBER: 1998-265328 JAPIO Full-text

TITLE: COSMETIC, PET FOOD AND LIPASE INHIBITOR AND FOOD  
CONTAINING THE SAME

INVENTOR: UCHINO KEIJIRO; MIYASHITA RUMIKO

PATENT ASSIGNEE(S): NIPPON FLOUR MILLS CO LTD

PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 10265328	A	19981006	Heisei	A61K007-00

## APPLICATION INFORMATION

STN FORMAT: JP 1997-76019 19970327

ORIGINAL: JP09076019 Heisei

PRIORITY APPLN. INFO.: JP 1997-76019 19970327

SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
Applications, Vol. 1998

AB PROBLEM TO BE SOLVED: To obtain a new lipase inhibitor by using a specific triterpene compound and its derivative as active ingredients and further to obtain cosmetics, pet foods and foods which are excellent in lipase inhibitory activity and high in safety by formulating this inhibitor thereto. SOLUTION: These cosmetic, pet food and food contain at least one kind selected from the group consisting of a compound of formula I or II [R<SP>1</SP> is OH and O-C(O)-CH<SB>3</SB>; R<SP>2</SP> to R<SP>4</SP> are each H, CH<SB>3</SB>, CH<SB>2</SB>OH, etc.; R<SP>5</SP> to R<SP>8</SP> are each H and CH<SB>3</SB>; R<SP>9</SP> is OH and the like; R<SP>10</SP> to R<SP>12</SP> are each H, CH<SB>3</SB>, etc.] and its derivative as active ingredients. As the lipase inhibitor, the compound of formula II and its derivative are particularly preferable. By formulating this lipase inhibitor with cosmetic materials, pet foods and foods, skin eruptions, pimples and skin roughening can be continuously suppressed and further the inhibitor can be utilized for preventing foods containing oils and fats from deterioration. Furthermore, the calorie of foods and feeds can be decreased and in addition adult diseases are effectively prevented.  
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(2007) on STN

ACCESSION NUMBER: 2003:21190 AGRICOLA Full-text  
DOCUMENT NUMBER: IND23310113  
TITLE: Quality changes in fresh-cut pear slices as affected by controlled atmospheres and chemical preservatives.  
AUTHOR(S): Gorny, J.R.; Hess-Pierce, B.; Cifuentes, R.A.; Kader, A.A.  
AVAILABILITY: DNAL (SB129.P66)  
SOURCE: Postharvest biology and technology, Apr 2002. Vol. 24, No. 3. p. 271-278  
Publisher: Amsterdam : Elsevier Science B.V.  
CODEN: PBTEED; ISSN: 0925-5214  
NOTE: Includes references  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Article  
FILE SEGMENT: Non-U.S. Imprint other than FAO  
LANGUAGE: English  
AB Low O<sub>2</sub> (0.25 or 0.5 kPa) elevated CO<sub>2</sub> (air enriched with 5, 10 or 20 kPa CO<sub>2</sub>), or superatmospheric O<sub>2</sub> (40, 60, or 80 kPa) atmospheres alone did not effectively prevent cut surface browning or softening of fresh-cut pear slices. A post-cutting dip of 2% (w/v) ascorbic acid, 1% (w/v) calcium lactate and 0.5% (w/v) cysteine adjusted to pH 7.0 did significantly extend shelf-life of 'Bartlett' pear slices, by inhibiting loss of slice flesh firmness and preventing cut surface browning. Participants in a quality evaluation could not distinguish between pear slices treated with this preservative solution and stored overnight at 0 degrees C and freshly prepared control pear slices. After 10 days storage in air at 0 degrees C, 82% of participants judged treated pear slices to be acceptable in appearance and 70% judged flavor to be acceptable.

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(2007) on STN

ACCESSION NUMBER: 2004:9603 AGRICOLA Full-text  
DOCUMENT NUMBER: IND43616942  
TITLE: Kinetics of polyphenol oxidase activity inhibition and browning of avocado puree preserved by combined methods.  
AUTHOR(S): Soliva-Fortuny, R.C.; Elez-Martinez, P.; Sebastian-Caldero, M.; Martin-Belloso, O.  
AVAILABILITY: DNAL (TP368.J68)  
SOURCE: Journal of food engineering, 2002 Nov. Vol. 55, no. 2 p. 131-137  
ISSN: 0260-8774  
NOTE: Includes references  
DOCUMENT TYPE: Article  
FILE SEGMENT: Non US  
LANGUAGE: English  
AB Enzymatic browning reactions limit the commercial shelf life of avocado puree, thus color preservation throughout storage becomes one of the main objectives for fruit processors. The aim of this work was to model the color changes that occurred in avocado puree preserved by combined methods during four months under refrigeration. Changes in polyphenol oxidase (PPO) activity and color were successfully described by first-order models. PPO activity decays could



be described by a simple first-order kinetic with rate constants of  $4.4 \times 10^{-3}$  to  $40.0 \times 10^{-3}$  day<sup>-1</sup>. On the other hand, browning ( $\Delta E^*$ ) of puree was due to  $L^*$  and, in a minor extent, to  $a^*$  changes, whereas  $b^*$  did not change significantly throughout time. A fractional conversion kinetic suited color data with high  $R^2$  coefficients and a good fitting to experimental values in the wide range of tried conditions.

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ACCESSION NUMBER: 1999:8419 AGRICOLA Full-text  
DOCUMENT NUMBER: IND21960633  
TITLE: Shelf-life of prepeeled potato cultivated, stored, and processed by various methods.  
AUTHOR(S): Ahvenainen, R.T.; Hurme, E.U.; Hagg, M.; Skytta, E.H.; Laurila, E.K.  
CORPORATE SOURCE: VTT Biotechnology and Food Research, Jokioinen, Finland.  
AVAILABILITY: DNAL (44.8 J824)  
SOURCE: Journal of food protection, May 1998. Vol. 61, No. 5. p. 591-600  
Publisher: Des Moines, Iowa : International Association of Milk, Food and Environmental Sanitarians.  
CODEN: JFPRDR; ISSN: 0362-028X  
NOTE: Includes references  
PUB. COUNTRY: Iowa; United States  
DOCUMENT TYPE: Article  
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension  
LANGUAGE: English

AB The effects of cultivation conditions, winter storage, peeling method, browning prevention chemicals replacing sodium bisulfite, and packing methods on the sensory, nutritional and microbiological quality of pre-peeled potato were examined. Two different cultivation lots of the potato variety Van Gogh were used. Cultivation and harvesting conditions and peeling method were the most important facts reducing the sensory quality, especially the appearance, of prepeeled and sliced potatoes. Cooking and baking of potatoes decreased the appearance defects detected in raw potatoes. The levels of vitamin C in packaged samples decreased during winter storage. Cooking for 10 min and keeping potatoes at 60 degrees C for 1 h after cooking also decreased the content of vitamin C. In potato samples immediately after treatments aerobic bacteria were present at levels of 400 to 2,950 CFU/g and lactic acid bacteria at levels of 8 to 16 CFU/g. The number of aerobic bacteria did not increase during storage, and the number of lactic acid bacteria increased at the most to 90 CFU/g. Peeling, washing and packaging methods, cultivation conditions, and winter storage did not have important effects on the number of microbes present.

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ACCESSION NUMBER: 1998:76234 AGRICOLA Full-text  
DOCUMENT NUMBER: IND21642638  
TITLE: Quality maintenance of minimally processed Chinese cabbage with low temperature and citric acid dip.  
AUTHOR(S): Kim, B.S.; Klieber, A.

CORPORATE SOURCE: Korea Food Research Institute, Kyonggi, Korea.  
 AVAILABILITY: DNAL (382 So12)  
 SOURCE: Journal of the science of food and agriculture,  
 Sept 1997. Vol. 75, No. 1. p. 31-36  
 Publisher: Sussex : John Wiley & Sons Limited.  
 CODEN: JSFAAE; ISSN: 0022-5142

NOTE: Includes references  
 PUB. COUNTRY: England; United Kingdom  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: Non-U.S. Imprint other than FAO  
 LANGUAGE: English

AB Chinese cabbage (*Brassica campestris* L *pekinensis* group) was minimally processed using best preparation techniques and stored at 0 and at 5 degrees C with and without dips in either citric acid, calcium chloride or ascorbic acid, all at 10 g litre<sup>-1</sup>. The visual quality, degree of chilling injury, pH and taste were evaluated. The most deleterious effects on quality were produced by black speck (gomasho) and browning. Citric acid inhibited the development of black speck and extended storage life from 10 days of the control to 14 days at 5 degrees C. At 0 degrees C the storage life was not extended by any dip, but citric acid improved quality by reducing black speck. Minimally processed Chinese cabbage treated with citric acid showed only a slight reduction of pH from 6.3 of the control to 6.1 (P less than or equal to 0.05) and taste was not significantly affected (P > 0.05). Microbial spoilage was not apparent during storage at 0 degree C for 35 days and 5 degrees C for 21 days under any treatment.

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ACCESSION NUMBER: 95:66670 AGRICOLA Full-text  
 DOCUMENT NUMBER: IND20486291  
 TITLE: Calcium treatment to maintain quality of zucchini squash slices.  
 AUTHOR(S): Izumi, H.; Watada, A.E.  
 CORPORATE SOURCE: Kinki University, Naga, Wakayama, Japan.  
 AVAILABILITY: DNAL (389.8 F7322)  
 SOURCE: Journal of food science, July/Aug 1995. Vol. 60, No. 4. p. 789-793  
 Publisher: Chicago, Ill. : Institute of Food Technologists.  
 CODEN: JFDSAZ; ISSN: 0022-1147

NOTE: Includes references  
 PUB. COUNTRY: Illinois; United States  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension  
 LANGUAGE: English

AB Zucchini squash slices dipped in solutions of CaCl<sub>2</sub> alone or with chlorine were stored at 0 degrees C, 5 degrees C, and 10 degrees C. Slices developed water soaked areas (chilling injury) at 0 degrees C and brown discoloration at 5 degrees C and 10 degrees C, which increased with storage. The amount and severity of chilling injury/browning /decay of water-dipped controls were least at 5 degrees C. Calcium treatments helped in reducing development of decay, rate of total microbial growth, ascorbic acid loss, and shear force decrease of slices stored at 0 degrees C and 10 degrees C, but not at 5 degrees C. Addition of chlorine to CaCl<sub>2</sub> seemed to have some benefits at 0 degrees C or 10 degrees C.

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ACCESSION NUMBER: 93:49696 AGRICOLA Full-text  
DOCUMENT NUMBER: FNI93001645  
TITLE: Nutritional aspects of food preservatives.  
AUTHOR(S): Quattrucci, E.; Masci, V.  
CORPORATE SOURCE: National Institute of Nutrition, Rome, Italy  
AVAILABILITY: DNAL (TX553.A3F65)  
SOURCE: Food additives and contaminants, Sept/Oct 1992. Vol. 9, No. 5. p. 515-525  
Publisher: London : Taylor & Francis.  
ISSN: 0265-203X  
Target Audience: Specialized  
NOTE: Paper presented at the International Symposium on Current Issues with Food Preservatives, National Institute of Nutrition, July 3-5, 1991, Rome, Italy.  
Literature review.  
Includes references.  
DOCUMENT TYPE: Article; (SURVEY OF LITURATURE)  
FILE SEGMENT: Non-U.S. Imprint other than FAO  
LANGUAGE: English

AB Despite the benefits attributed to food preservatives, some concern still remains regarding their safety and possible influence on nutrients. Surprisingly, there is quite a lack of scientific knowledge in this field. In order to describe a few examples, the effects of the extensively used sulphite on thiamine, folates, pyridoxal and other nutrients have been reported. Among its antibrowning effects, inhibition of ascorbic acid browning is also considered. As far as sorbic acid is concerned, notwithstanding its easy reaction with protein, probably the acid environment of the stomach determines the breakdown of the sorbic-protein adducts. Detoxication of nitrite by tocopherol and ascorbic acid leads, in the last case, to dehydroascorbic acid and its oxidative products with loss of vitamin activity. Any oxidizing substance destroys ascorbic acid, vitamin E and free vitamin A. Phosphates are largely used with different aims, including preservation, in food processing. Their antimicrobial activity is due to both a direct effect and an interaction with other antimicrobials. Sequestering capacity of phosphates and its nutritional implications are discussed. Also mechanisms of action of organic acids are reported, focusing on sorbic acid effects on single amino acids and proteins. Finally, the little information available about the potential impact of food preservatives on nutritional functions is presented.

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ACCESSION NUMBER: 93:66579 AGRICOLA Full-text  
DOCUMENT NUMBER: IND93043686  
TITLE: Kinetics of the inhibition of ascorbic acid browning by sulphite.  
AUTHOR(S): Davies, C.G.A.; Wedzicha, B.L.  
CORPORATE SOURCE: University of Leeds, Leeds, UK  
AVAILABILITY: DNAL (TX553.A3F65)  
SOURCE: Food additives and contaminants, Sept/Oct 1992. Vol. 9, No. 5. p. 471-477  
Publisher: London : Taylor & Francis.

ISSN: 0265-203X

NOTE: Paper presented at the International Symposium on  
Current Issues with Food  
Preservatives, July 3-5, 1991, Rome, Italy.  
Includes references.

DOCUMENT TYPE: Article

FILE SEGMENT: Non-U.S. Imprint other than FAO

LANGUAGE: English

AB Despite differences in the structures of aldoses and ascorbic acid, ASA, the non-enzymic browning of the latter involves intermediates similar to those found in Maillard browning. The kinetics of the sulphite-inhibited browning of ASA suggest that, under anaerobic conditions, the rate of reaction of sulphite species, S(IV), is of first order with respect to S(IV). The possibility that S(IV) could catalyse the hydrolysis of the lactone ring of ASA is considered by reference to D-glucono-beta-lactone. Evidence is presented to suggest that, under aerobic conditions, autoxidation of ASA leads to the oxidation of S(IV). The composition of melanoidins from ASA-glycine mixtures is compared with that from arabinose-glycine; the former contain 2.5 times more ASA-derived residues per glycine molecule than arabinose-derived residues per glycine molecule in the latter. The implications of these findings to the mechanism of ASA browning are discussed.

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ACCESSION NUMBER: 84:133735 AGRICOLA Full-text

DOCUMENT NUMBER: FNI84005386

TITLE: Control of enzymatic browning in processed  
mushrooms (*Agaricus bisporus*).

AUTHOR(S): McCord, Jeffery Dodd; Kilara, Arun

AVAILABILITY: DNAL (389.8 F7322)

SOURCE: Journal of food science., Sept/Oct 1983 Vol.  
48, No. 5. p. 1479-1483 ill., charts  
Publisher: Chicago, Ill. : Institute of Food  
Technologists.  
ISSN: 0022-1147

Target Audience: Specialized

NOTE: Includes 17 references.

DOCUMENT TYPE: Article

FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension

LANGUAGE: English

AB Abstract: Mechanisms influencing the destruction of the browning enzyme (polyphenol oxidase) in mushrooms processed with citric acid were examined (at various citric acid pH levels) by characterizing the enzyme's kinetics and conditions associated with its activity and inactivation. The results indicated that the enzyme was inactivated at pH 4.0; was stable to 10-minute exposures at 25 degrees C in the pH range of 4.0-8.0; and was active at 45 degrees C (but not at 70 degrees C) at pH 6.5. Thermal inactivation of the enzyme followed pseudo first-order kinetics. The activation energy at pH 6.5 for inactivation was estimated to be 41.1 kcal/mole. Two rate constants (i.e., 2 activation energies) were detected at pH 3.5, with the activation energies for enzyme inactivation being 8.7 and 21.8 kcal/mole, up to 5 minutes and after 5 minutes, respectively. The results indicated that acidification of water used in vacuum hydration or blanching should improve the color of processed mushrooms. The use of citric acid inhibits both enzymatic and nonenzymatic activity, resulting in partial discoloration inhibition even if the enzyme is not rapidly inactivated. (wz)

L91 ANSWER 16 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2003:85266 CABA Full-text

DOCUMENT NUMBER: 20033045474

TITLE: Effect of fertilization and storage conditions on postharvest quality of Zacatecas-type peach (*Prunus persica* (L.) Batsch)

AUTHOR: Hernandez-Fuentes, A. D.; Colinas, M. T. L.; Cortes, J. F.; Saucedo, C. V.; Sanchez, P. G.; Alcazar, J. R.; Tagliavini, M. [EDITOR]; Toselli, M. [EDITOR]; Bertschinger, L. [EDITOR]; Brown, P. [EDITOR]; Neilsen, D. [EDITOR]; Thalheimer, M. [EDITOR]

CORPORATE SOURCE: Instituto de Ciencias Agropecuarias, Universidad Autonoma del Estado de Hidalgo, Tulancingo, Hgo, Mexico.

SOURCE: Acta Horticulturae, (2002) No. 594, pp. 507-515. 18 ref.

Publisher: International Society for Horticultural Science (ISHS). Leuven

Price: Journal article; Conference paper ; 124 EURO

Meeting Info.: Proceedings of the international symposium on foliar nutrition of perennial fruit plants, Meran, Italy, 11-15 September, 2001.

ISSN: 0567-7572; ISBN: 90-6605-826-9

PUB. COUNTRY: Belgium

DOCUMENT TYPE: Journal

LANGUAGE: English

ENTRY DATE: Entered STN: 6 Jun 2003

Last Updated on STN: 6 Jun 2003

AB To study the relationship of fertilizer formulation, method of application, and cold storage conditions to the fruit quality and sensitivity to internal browning of local race Zacatecas-type peach, research was done in an orchard with ten-year-old trees that had been managed under minimum tillage for five years in Mexico. Three formulations of soil applied NPK were compared, each of them with or without foliar supply of Ca, Mg, B and Mo. The variables evaluated were firmness, colour, titratable acidity, total soluble solids, ethanol, acetaldehyde, total phenols, polyphenol oxidase [catechol oxidase], and phenylalanine ammonia-lyase. Soil and foliar fertilizers with lower N content increased pulp firmness. This effect persisted during storage at both 5[deg]C and room temperature. Soil and foliar applications of fertilizers with higher N content reduced fruit firmness, while those with higher K content increased the fruit content of phenols. Foliar fertilization improved external fruit colour and reduced the activity of phenylalanine ammonia-lyase and polyphenol oxidase. Both soil and foliar applications significantly changed content of total soluble solids, malic acid and ethanol. Applications with higher N favoured synthesis of acetaldehyde. Fruits stored both under refrigeration and at room temperature ripened normally.

L91 ANSWER 17 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2003:47041 CABA Full-text

DOCUMENT NUMBER: 20033016337

TITLE: Inhibition of browning formation in banana puree and banana milk drink

AUTHOR: Mohammad Ayub; Alam Zeb

CORPORATE SOURCE: Department of Food Science and Technology, NWFP Agricultural University, Peshawar, Pakistan.

SOURCE: Sarhad Journal of Agriculture, (2002) Vol. 18, No. 4, pp. 455-461. 9 ref.

Publisher: NWFP Agricultural University. Peshawar

ISSN: 1016-4383

PUB. COUNTRY:

Pakistan

DOCUMENT TYPE:

Journal

LANGUAGE:

English

ENTRY DATE:

Entered STN: 7 Mar 2003

Last Updated on STN: 7 Mar 2003

AB An endeavour was made to study the effect of antioxidants citric acid and ascorbic acid and the chemical preservative potassium metabisulfite on inhibition of browning in banana pulp and banana milk drink obtained in Pakistan. In the first part of the experiment, the effect of these additives was studied on inhibition of browning in banana puree. In the second part, banana milk drink was prepared and the additives were placed individually or in combination and their influence was studied for chemical analysis (ascorbic acid, acidity and total soluble solid (TSS)) and sensory evaluation (colour and taste) of the product. Blanching of banana puree inhibited browning for some time. Citric acid and ascorbic acid controlled browning to some extent in both of the products but were found more effective when used together with potassium metabisulfite (KMS). No objectionable sensory effect was noticed in the product during 16 days at refrigerated storage. There was a significant loss of ascorbic acid and increase in acidity and total soluble solids in banana milk drink during both treatment and storage.

L91 ANSWER 18 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2002:167976 CABA Full-text

DOCUMENT NUMBER: 20023121375

TITLE: Influence of dehydration temperature and pretreatment to control browning and preservation of onion flakes

AUTHOR: Rajkumar, P.; Sreenarayanan, V. V.

CORPORATE SOURCE: Dept. of Agrl. Processing, College of Agrl. Engg., Tamil Nadu Agrl. University, Coimbatore - 641 003, India.

SOURCE: Madras Agricultural Journal, (2001) Vol. 88, No. 7/9, pp. 400-403. 6 ref.  
 Publisher: Tamil Nadu Agricultural University.  
 Coimbatore  
 ISSN: 0024-9602

PUB. COUNTRY:

India

DOCUMENT TYPE:

Journal

LANGUAGE:

English

ENTRY DATE:

Entered STN: 4 Oct 2002

Last Updated on STN: 4 Oct 2002

AB Influence of dehydration temperatures and pre-treatment levels to control browning and preservation were assessed by dehydrating Pusa White onion slices at 50, 60 and 70[deg]C temperatures with 0.2, 0.3 and 0.4% potassium metabisulfite as a pre-treatment. The time required for dehydration was comparatively lesser for the pre-treated samples than the control in all the selected temperatures. From the biochemical analyses, it was observed that the ascorbic acid retention was comparatively higher at 50[deg]C with 0.4% sulfitation level; the sugar content was significantly higher at 50[deg]C in control samples and the non-enzymatic browning (Maillard reaction) was comparatively lesser at 60[deg]C with 0.3% sulfitation level. From the organoleptic study, it was observed that the onion flakes dehydrated at 60[deg]C with 0.3% sulfitation level scored the maximum points. A progressive increase in moisture content, reduction in ascorbic acid and rehydration ratio were also observed during storage.

L91 ANSWER 19 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2002:2772 CABA Full-text  
 DOCUMENT NUMBER: 20013096137  
 TITLE: Effect of calcium and potassium fertilizer applied at the time of planting on the control of internal browning under cold storage of Mauritius pineapple  
 AUTHOR: Herath, H. M. I.; Bandara, D. C.; Banda, D. M. G. A.  
 CORPORATE SOURCE: Postgraduate Institute of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka.  
 SOURCE: Tropical Agricultural Research, (2000) Vol. 12, pp. 352-359. 11 ref.  
 Publisher: Postgraduate Institute of Agriculture (PGAI), University of Peradeniya. Peradeniya  
 ISSN: 1016-1422  
 PUB. COUNTRY: Sri Lanka  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 11 Jan 2002  
 Last Updated on STN: 11 Jan 2002

AB Pineapple (*Ananas comosus*) is major fruit crop grown in Sri Lanka, both for the local market and for export. The development of internal browning (IB) under cold storage during sea shipment is a major problem faced by pineapple exporters. The experiment was conducted in 2 different locations in Sri Lanka (Giriulla and Pallewela) to determine the effect of preharvest application of different levels of calcium (CaO; 100, 125 and 150 kg/ha) and potassium (MOP; 55, 110 and 220 kg/ha) fertilizer as basal dressing for the control of IB development in pineapple cv. Mauritius. All other fertilizer requirements were provided to all the treatments at recommended levels. Immediately after harvest, fruits stored in a cold room (15[deg]C and 80-85% RH) were analysed for fruit calcium and potassium contents, intensity of IB development, total soluble solids, ascorbic acid, percentage weight loss, pH and titratable acidity for 4 weeks at weekly intervals. Fruits were kept for 72 h at room temperature before the above analysis. Results showed that the IB development in fruits harvested from all the calcium- and potassium-treated plots were significantly lower than the control up to the 4th week of cold storage, Fruit calcium and potassium contents were higher in all the treatments compared with control and a significant effect could be observed with increased calcium and potassium levels for the variations of percentage weight loss, TSS, acidity and ascorbic acid contents. Calcium (150 kg/ha) and potassium (220 kg/ha) treatments showed significantly high fruit calcium and potassium contents, low percentage weight loss and high TSS values up to the 3rd week of cold storage. Also, they were relatively high in ascorbic acid content and low in titratable acidity. It is concluded that application of calcium and potassium fertilizers as a basal dressing could increase the fruit calcium and potassium contents, hence could reduce IB development in all the treatments compared to control. Application of calcium at 150 kg/ha and potassium at 220 kg/ha is best for the control of IB.

L91 ANSWER 20 OF 39 CABA COPYRIGHT 2007 CABI on STN  
 ACCESSION NUMBER: 2001:87429 CABA Full-text  
 DOCUMENT NUMBER: 20013054064  
 TITLE: Effect of selenium on tea quality  
 AUTHOR: Hu QiuHui; Pan GenXing; Zhu JianChun; Ding RuiXing; Hu, Q. H.; Pan, G. X.; Zhu, J. C.; Ding, R. X.  
 CORPORATE SOURCE: College of Food Sciences, Nanjing Agricultural University, Nanjing 210095, China.  
 SOURCE: Journal of Tea Science, (2000) Vol. 20, No. 2, pp. 137-140. 8 ref.  
 Publisher: Tea Research Institute, CAAS. Hangzhou

ISSN: 1000-369X  
 PUB. COUNTRY: China  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 6 Sep 2001  
 Last Updated on STN: 6 Sep 2001

AB The effects of Se application on the storage quality and composition of amino acids in [made] tea were studied. The absorbance of Se-rich tea extracting solution at 556 nm was more stable than that of Se-low tea during a 12-h storage period, indicating that the browning and oxidation of the tea extracting solution were prevented by Se. The vitamin C preservation rate of Se-rich tea was 78.54% compared with 48.21% in low-Se tea after 90 days' storage at room temperature. Se application increased the total amount of amino acids by 8.3-14.8%, essential amino acids by 8.8-14.8%, methionine by 6.10-8.7%, and cystine by 38.7-95.6%.

L91 ANSWER 21 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2000:89449 CABA Full-text  
 DOCUMENT NUMBER: 20000310754  
 TITLE: Basal application of fused magnesium phosphate (FMP) on the incidence of post-harvest internal browning of Mauritius pineapple  
 AUTHOR: Selvarajah, S.; Herath, H. M. W.; Bandara, D. C.  
 CORPORATE SOURCE: Postgraduate Institute of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka.  
 SOURCE: Tropical Agricultural Research, (1999)  
 Vol. 11, pp. 432-437. 10 ref.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 9 Aug 2000  
 Last Updated on STN: 9 Aug 2000

AB A field study was carried out on the effect of fused magnesium phosphate (FMP) as a preharvest treatment on the development of internal browning (IB) in pineapple cv. Mauritius. The recommended rate of fertilizer was kept constant for all treatments. The treatments consisted of 3 rates of different levels of FMP (0, 250 or 500 kg/ha) applied as basal dressing in a randomized complete block design. Immediately after harvesting, fruits were stored in a cold room for 4 weeks. Biochemical parameters of fruits were determined immediately after harvest and at weekly intervals after a 3 day exposure at room temperature (27-29[deg]C). The application of FMP to the soil reduced internal browning. Fruits harvested from plants treated with FMP (250 and 500 kg/ha) and stored for 1, 2, 3 and 4 weeks at 15[deg]C and after 3 days at room temperature had significantly lower IB intensity than control fruits. Fruits affected by IB had low ascorbic acid content and total soluble solid, and higher titratable acidity.

L91 ANSWER 22 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 2000:53240 CABA Full-text  
 DOCUMENT NUMBER: 20000308483  
 TITLE: Effect of pre-harvest calcium treatment on post-harvest quality of pineapple  
 AUTHOR: Selvarajah, S.; Herath, H. M. W.; Bandara, D. C.; Banda, D. M. G. A.  
 CORPORATE SOURCE: Postgraduate Institute of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka.  
 SOURCE: Tropical Agricultural Research, (1998)  
 Vol. 10, pp. 214-224. 18 ref.



DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 11 May 2000  
 Last Updated on STN: 11 May 2000

AB Internal browning (IB) disorder of pineapples (*Ananas comosus*) is a common problem encountered by exporters as a result of cold storage during shipment. A study was carried out on the effect of calcium as a pre-harvest treatment on IB development and peroxidase activity in pineapple cv. Mauritius. In field experiments at three locations in Sri Lanka, pineapples were given three different levels of calcium (CaO) applied as basal dressing in a randomized complete block design. Immediately after harvesting fruits from all experimental locations were stored in a cold room (15[deg]C and 80-85% RH) for four weeks. Biochemical parameters of fruits were determined immediately after harvest and at weekly intervals followed by three days exposure at room temperature. Polyacrylamide gel electrophoresis (PAGE) was carried out with fruit samples to determine the peroxidase isoenzyme activity. Fruits harvested from plants treated with lower level (75 kg ha<sup>-1</sup>) of calcium (CaO) and stored for 1, 2, 3 and 4 weeks at 15[deg]C followed by three days at room temperature had significantly lower IB intensity than the controls. With higher level of calcium (150 kg ha<sup>-1</sup>), there was no IB up to fourth week. The fruits affected by IB had low ascorbic acid content and total soluble solids, and higher titratable acidity than the unaffected fruit. The peroxidase activity of treated fruits was significantly lower than the control.

L91 ANSWER 23 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 97:45648 CABA Full-text  
 DOCUMENT NUMBER: 19970303842  
 TITLE: Effect of postharvest treatments on physiology and quality of litchi and their economics  
 AUTHOR: Wang, S. F.; Cheng, Z. M.; Li, Y.; Wang, Y. Y.; Zhen, L. Y.; Brumfield, R. G. [EDITOR]  
 CORPORATE SOURCE: Postharvest Laboratory, Fujian Subtropical Horticultural Botany Research Center, Zhangzhou, Fujian 363000, China.  
 SOURCE: Acta Horticulturae, (1996) No. 429, pp. 503-507. 3 ref.  
 Price: Conference paper; Journal article  
 Meeting Info.: Proceedings of the XIIIth international symposium on horticultural economics, August 4-9, 1996, Rutgers, The State University of New Jersey, New Brunswick, New Jersey, USA.  
 ISSN: 0567-7572; ISBN: 90-6605-768-8  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 19 May 1997  
 Last Updated on STN: 19 May 1997

AB Litchi cv. Hei Ye (also called Hak Yip or Groff) fruits were harvested at the full-red colour stage from trees growing at Fugong, Zhangzhou, China. The next day they were dipped in various combinations of 10% citric acid, 0.2% sodium benzoate, 0.07% methyl topsin [thiophanate-methyl] and detergent for various durations. In 2 of the treatments, the dips were heated to 46.5[deg]C. All fruits (including untreated controls) were then packed in sealed PP [polypropylene?] bags and stored at 4[deg]C. Fruits were removed at intervals and peeled for analysis of the rind. Dip treatments, particularly the hot ones, increased peel electrolyte leakage and reduced peel pH and peel polyphenol oxidase [catechol oxidase] activity compared with controls. The hot treatments significantly inhibited rind browning compared with other treatments, but also induced loss of firmness and reddish pulp during the later stages of storage. A 10-min dip in citric acid + sodium benzoate gave

the best results in terms of aroma and firmness and resulted in better peel colour than the other non-heated treatments and the control. Compared with the traditional method of using SO<sub>2</sub> fumigation plus a low-pH dip, this treatment was safer, easier and cheaper (total cost PBY 64/ton, as opposed to PBY 110/ton).

L91 ANSWER 24 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 92:86201 CABA Full-text  
 DOCUMENT NUMBER: 19920314902  
 TITLE: The effects of preharvest calcium sprays on the storage of table grapes  
 AUTHOR: Lu, C. W.; Ouyang, S. R.  
 CORPORATE SOURCE: Tianjin Academy of Agriculture, Tianjin, China.  
 SOURCE: Acta Horticulturae Sinica, (1990) Vol. 17, No. 2, pp. 103-110. 9 ref.  
 ISSN: 0513-353X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 1 Nov 1994  
 Last Updated on STN: 1 Nov 1994

AB Bunches of grapes on cultivars Taifi Rose and Long Yan vines were sprayed with 0.5, 1.0 or 1.5% Ca(NO<sub>3</sub>)<sub>2</sub> 10 days or 1 month before harvest, then bunches were stored in polyethylene bags for 122 or 133 days at 3-5[deg]C. The highest concentration, applied 10 days before harvest, reduced storage losses in Taifi Rose and Long Yan by 76 and 64%, increased berry turgor pressure by 406 and 367 g, and increased strength of attachment of berries to the stalks by 130 and 79 g, respectively. Treatments retarded losses in soluble pectin and changed the ratio of fructose:total acidity. They also reduced polyphenoloxidase activity and decreased the losses of tannins and ascorbic acid so that there was less internal browning of berries. The solute leakage was reduced and berry Ca content increased by up to 39%.

L91 ANSWER 25 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 89:48368 CABA Full-text  
 DOCUMENT NUMBER: 19891604557  
 TITLE: Agrotechnical and storage conditions, and utilization characteristics of potato tubers Warunki agrotechniczne i przechowalnictwo a cechy uzytkowe bulw ziemniaka  
 AUTHOR: Zgorska, K.; Frydecka-Mazurczyk, A.  
 CORPORATE SOURCE: Zakad Przechowalnictwa, Inst. Ziemniaka, Jadwisin, 05-140 Serock, Poland.  
 SOURCE: Biuletyn Instytutu Ziemniaka, (1985) No. 33, pp. 109-120. 9 ref.  
 ISSN: 0137-1576  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Polish  
 SUMMARY LANGUAGE: Russian; English  
 ENTRY DATE: Entered STN: 1 Nov 1994  
 Last Updated on STN: 1 Nov 1994

AB A total of 28 varieties were analysed in 3-year experiments during the period 1974-83. It was concluded that DM and starch contents of tubers depended on variety, N fertilization and year of cultivation. Differences of up to 4.2% were observed between years, although differences of less than 1% between years were observed in varieties Dalia, Irys, Krokus, Narcyz, Pola and Sowa. Sasanka, Soko and Aba varied by 2.4-3.1% between years for starch content but only by 1.1-1.5% for DM content. The reverse was true, however, for Azalia,

Alka, Janka and Rys[acute]. Sugar and vitamin C content of tubers depended on variety and conditions during growth. Storage temperature had a marked effect on reducing sugars content, while storage duration affected vitamin C content. Blackening of tuber flesh before and after cooking was a varietal character, being largely absent in Dalia, Fionia, Irys, Elida, Kalina, Pola and Sowa, but was also significantly affected by N fertilization levels, years, tuber maturity and duration of storage.

L91 ANSWER 26 OF 39 CABA COPYRIGHT 2007 CABI on STN

ACCESSION NUMBER: 81:45229 CABA Full-text  
 DOCUMENT NUMBER: 19800714027  
 TITLE: Correlations between potassium content and quality of potatoes  
 Beziehungen zwischen Kaliumgehalt und Qualitat von Kartoffeln  
 AUTHOR: Marschner, H.; Krauss, A.  
 CORPORATE SOURCE: Institut fur Pflanzenernahrung, Universitat Hohenheim, 7000 Stuttgart 70, German Federal Republic.  
 SOURCE: Kartoffelbau, (1980) Vol. 31, No. 2, pp. 65-67. 9 ref.  
 ISSN: 0022-9156  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 ENTRY DATE: Entered STN: 1 Nov 1994  
 Last Updated on STN: 1 Nov 1994

AB Studies on the effect of K on the starch content of potato tubers are reviewed. In a trial on loam soil in 1979, potatoes cv. Grata were given 240 or 340 kg K<sub>2</sub>O/ha. The higher K rate increased the K content of the tubers and decreased the starch and reducing sugar contents especially in the basal part of the tubers. At both rates of K the K content was higher and the starch content lower in the apical than in the basal part of the tuber. The K content of the tubers was also negatively correlated with that of reducing sugars. The sum of the concentrate of K and reducing sugars remained more or less constant, ranging from 161 to 167 mM. The osmotic significance of the changes is discussed. The need for adequate K fertilization especially in dry situations to prevent accumulation of reducing sugars and reduction in tuber quality is noted. The relation between K content, citric acid content and blackening of tubers and the K fertilizer requirements of potatoes for different purposes are also discussed.

L91 ANSWER 27 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:405600 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV200200405600  
 TITLE: Modified atmosphere packaging of fennel.  
 AUTHOR(S): Artes, F. [Reprint author]; Escalona, V. H.; Artes-Hdez, F.  
 CORPORATE SOURCE: Postharvest and Refrigeration Group, Department of Food Engineering, Technical University of Cartagena, Paseo Alfonso XIII, 44. 30203, Cartagena, Murcia, Spain  
 fr.artes@upct.es  
 SOURCE: Journal of Food Science, (May, 2002) Vol. 67, No. 4, pp. 1550-1554. print.  
 CODEN: JFDSAZ. ISSN: 0022-1147.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 24 Jul 2002  
 Last Updated on STN: 24 Jul 2002

AB Fennel was washed on the butt-end cut with ascorbic (1%) and citric (5%) acids and packed in polypropylene (PP) baskets sealed with PP film to generate a modified atmosphere. As a control, perforated PP was used. Storage conditions were 14 d at 0degreeC followed by 4 d in air at 15degreeC. Chemical and sensory quality attributes were monitored. No browning of external leaves developed. Modified atmosphere of 16 to 17% O2 and 3 to 4% CO2 was able to inhibit browning of the butt-end cut, the main factor for keeping quality of fennel, but treatments with antioxidants did not. In all treatments, green color and firmness decreased, although under modified atmosphere the best results for keeping fennel quality were found.

CC Biochemistry studies - General 10060  
 Biochemistry studies - Vitamins 10063  
 Food technology - General and methods 13502  
 Food technology - Fruits, nuts and vegetables 13504

IT Major Concepts  
 Foods

IT Chemicals & Biochemicals  
 ascorbic acid: effects, food preservative, uses;  
 citric acid: effects, food preservative, uses

IT Miscellaneous Descriptors  
 fennel bulbs: analysis, browning, color, keeping quality,  
 modified atmosphere packaging effects, texture, vegetable; food  
 chemistry; food packaging; food science; food technology

ORGN Classifier  
 Umbelliferae 26915  
 Super Taxa  
 Dicotyledones; Angiospermae; Spermatophyta; Plantae  
 Organism Name  
 Foeniculum dulce [fennel]  
 Taxa Notes  
 Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants

RN 50-81-7Q (ascorbic acid)  
 62624-30-0Q (ascorbic acid)  
 77-92-9 (citric acid)

L91 ANSWER 28 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on  
 STN

ACCESSION NUMBER: 2001:62815 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV200100062815  
 TITLE: Preparation of fruit salads with fruits processed under  
 high pressure.  
 Original Title: Preparacion de macedonias con frutos  
 tratados por alta presion.  
 AUTHOR(S): Prestamo, G. [Reprint author]; Arroyo, G.  
 CORPORATE SOURCE: Instituto del Frio (CSIC), Ciudad Universitaria, 28040,  
 Madrid, Spain  
 SOURCE: Alimentaria, (Diciembre, 2000) Vol. 37, No. 318,  
 pp. 25-30. print.  
 CODEN: ALMNEC. ISSN: 0300-5755.  
 DOCUMENT TYPE: Article  
 LANGUAGE: Spanish  
 ENTRY DATE: Entered STN: 31 Jan 2001  
 Last Updated on STN: 12 Feb 2002

AB The aim of the present work was to study the high pressure behavior of some fruits to be preserved. The samples were subjected to high pressure of 400 MPa at 5degreeC and 20degreeC for 30 mm. They were analyzed before, after high pressure treatment and after storage at 5degreeC. The color sensorial test showed that melon was the most suitable among the assayed fruits to be preserved with high pressure. In pears and yellow peaches a brown color was induced and enhanced during storage. In kiwifruit the green color went to

light yellow after the treatment. Pre-treatments of 20 mM ascorbic acid were necessary to prevent the browning. The texture was acceptable in all fruit treated. Polyphenoloxidase and Peroxidase activity were not inactivated under high pressure, however the enzyme activity was higher at 20degreeC than at 5degreeC. Mesophilic aerobic microorganisms lose their ability to grow on nutrient agar in the treated samples. The electric conductivity was higher in the samples treated with high pressure at 20degreeC than at 5degreeC. The fruit behavior was better at 5degreeC than at 20degreeC.

CC Food technology - Fruits, nuts and vegetables 13504  
 Biochemistry studies - Vitamins 10063  
 Enzymes - General and comparative studies: coenzymes 10802  
 Food technology - General and methods 13502

IT Major Concepts  
 Foods

IT Chemicals & Biochemicals  
 ascorbic acid; peroxidase; polyphenoloxidase

IT Methods & Equipment  
 high pressure treatment: food preservation method

IT Miscellaneous Descriptors  
 browning; fruit salads: fruit; kiwifruit: fruit; melon:  
 fruit; pears: fruit; temperature effect; yellow peaches: fruit

ORGN Classifier  
 Microorganisms 01000  
 Super Taxa  
 Microorganisms  
 Organism Name  
 microorganism: mesophilic aerobic  
 Taxa Notes  
 Microorganisms

RN 50-81-7Q (ascorbic acid)  
 62624-30-0Q (ascorbic acid)  
 9003-99-0 (peroxidase)  
 9002-10-2 (polyphenoloxidase)

L91 ANSWER 29 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on  
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ACCESSION NUMBER: 1999:146887 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV199900146887  
 TITLE: Properties of ascorbic acid and its applications in food  
 processing: A critical appraisal.  
 AUTHOR(S): Chauhan, A. S. [Reprint author]; Ramteke, R. S.; Eipeson,  
 W. E.  
 CORPORATE SOURCE: Dep. Fruit Vegetable Technol., Central Food Technol. Res.  
 Inst., Mysore 570 013, India  
 SOURCE: Journal of Food Science and Technology, (Sept.-Oct.,  
 1998) Vol. 35, No. 5, pp. 381-392. print.  
 CODEN: JFSTAB. ISSN: 0022-1155.  
 DOCUMENT TYPE: Article  
 General Review; (Literature Review)  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 13 Apr 1999  
 Last Updated on STN: 13 Apr 1999

AB L-ascorbic acid (vitamin C) plays important roles in human nutrition as well  
 as in food processing. L-ascorbic acid occurs naturally in fruits and  
 vegetables and citrus fruits are rich sources of this vitamin. The west Indian  
 cherry is reported to be the richest source of L-ascorbic acid. It exists in  
 a variety of tautomeric forms. Its chemical properties show reducing  
 behaviour and it can form derivatives. Titrimetric and spectrophotometric  
 methods can be used for the analytical determination of L-ascorbic acid.  
 Commercially, L-ascorbic acid is manufactured either by enzymatic method or by

a direct fermentation process. Ascorbic acid finds several applications in food processing. It acts as a preservative to prevent enzymatic browning during processing, as an antioxidant and it promotes clarity as well as preservation of taste and flavour during beer and wine fermentation as well as many other food processing operations. This paper critically reviews the various aspects of L-ascorbic acid such as its occurrence, chemistry, analytical methods for its determination, commercial synthesis and its role in food processing vis-a-vis human nutrition.

CC Food technology - General and methods 13502  
 Biochemistry methods - General 10050  
 Biochemistry studies - General 10060  
 Enzymes - General and comparative studies: coenzymes 10802  
 Nutrition - General studies, nutritional status and methods 13202  
 Sense organs - General and methods 20001

IT Major Concepts  
 Biochemistry and Molecular Biophysics; Foods

IT Chemicals & Biochemicals  
 L-ascorbic acid [vitamin C]: antioxidant, chemical properties,  
 food preservative, nutrient

IT Methods & Equipment  
 enzymatic method: synthetic method; fermentation: food processing  
 method; spectrophotometry: analytical method; titrimetry: analytical  
 method

IT Miscellaneous Descriptors  
 beer: alcoholic beverage, flavor, taste; browning; fruits:  
 fruit; vegetables: vegetable; wine: alcoholic beverage, taste, flavor

ORGN Classifier  
 Hominidae 86215  
 Super Taxa  
 Primates; Mammalia; Vertebrata; Chordata; Animalia  
 Organism Name  
 human  
 Taxa Notes  
 Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 50-81-7 (L-ascorbic acid)  
 50-81-7 (vitamin C)  
 62624-30-0Q (ASCORBIC ACID)

L91 ANSWER 30 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on  
 STN

ACCESSION NUMBER: 1999:44035 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV199900044035  
 TITLE: Prevention of enzymatic browning during  
 freezing, storage and thawing of Cherimoya (Cherimoya  
 cherimola, Mill) derivatives.  
 AUTHOR(S): Mastrocola, D. [Reprint author]; Manzocco, L.; Poiana, M.  
 CORPORATE SOURCE: Dip. Sci. Alimenti, Univ. Udine, Via Marangoni 97, 33100  
 Udine, Italy  
 SOURCE: Italian Journal of Food Science, (1998) Vol. 10,  
 No. 3, pp. 207-215. print.  
 CODEN: ITFSEY. ISSN: 1120-1770.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 10 Feb 1999  
 Last Updated on STN: 10 Feb 1999

AB The objective of this research was to obtain frozen derivatives (puree and  
 slices) from Cherimoya fruit and verify the effectiveness of some substances,  
 individually or combined, on the prevention of enzymatic browning (EB) during  
 freezing, storage and thawing of these products. Results showed that the  
 addition of 0.2% ascorbic acid plus 0.2% citric acid with or without 0.1%

sodium chloride to Cherimoya puree and, in the case of slices, dipping for 15 min in solutions containing the same substances, allowed complete control of browning to be obtained during freezing, storage and thawing.

CC Food technology - General and methods 13502  
 Biochemistry studies - General 10060  
 Enzymes - General and comparative studies: coenzymes 10802  
 Temperature - General measurement and methods 23001  
 IT Major Concepts  
 Foods  
 IT Chemicals & Biochemicals  
 ascorbic acid: food preservative; citric acid:  
 food preservative; sodium chloride: food  
 preservative  
 IT Miscellaneous Descriptors  
 cherimoya puree: freezing, fruit product, thawing, storage; cherimoya  
 slices: freezing, fruit product, storage, thawing; enzymatic  
 browning  
 ORGN Classifier  
 Annonaceae 25575  
 Super Taxa  
 Dicotyledones; Angiospermae; Spermatophyta; Plantae  
 Organism Name  
 Cherimoya cherimola [cherimoya]  
 Taxa Notes  
 Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants  
 RN 50-81-7Q (ascorbic acid)  
 62624-30-0Q (ascorbic acid)  
 77-92-9 (citric acid)  
 7647-14-5 (sodium chloride)

L91 ANSWER 31 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on  
 STN

ACCESSION NUMBER: 1998:270549 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV199800270549  
 TITLE: Control of browning in frozen puree of cherimoya  
 (Annona cherimola, mill.) fruit.  
 AUTHOR(S): Manzocco, Lara [Reprint author]; Mastrocola, Dino; Poiana,  
 Marco  
 CORPORATE SOURCE: Dip. Sci. Alimenti, Univ. Udine, Via Marangoni 97, 33100  
 Udine, Italy  
 SOURCE: Sciences des Aliments, (1998) Vol. 18, No. 1, pp.  
 101-107. print.  
 CODEN: SCALDC. ISSN: 0240-8813.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 24 Jun 1998  
 Last Updated on STN: 24 Jun 1998

AB The extensive polymorphism and the small size of the fruits of Cherimoya  
 (Annona cherimola, Mill.), known in Italy under the name of "annona",  
 influence the marketability of this product. Further more annona derivatives  
 are very sensitive to enzymatic browning even during storage in the frozen  
 state. The objective of this research was to verify the effectiveness of  
 combined pretreatments on the prevention of enzymatic browning during freezing  
 and thawing of annona puree. In particular the combination of two or more  
 "mild pretreatments", which separately are incapable of obtaining complete  
 control of browning in vegetal tissue, was studied. Results showed that the  
 addition of 2 g cntdot kg-1 ascorbic acid plus 2 g cntdot kg-1 citric acid  
 with or without 1 g cntdot kg-1 sodium chloride to annona puree allowed  
 complete browning control during freezing, storage and thawing.  
 CC Food technology - General and methods 13502

Biochemistry studies - General 10060  
 Enzymes - General and comparative studies: coenzymes 10802  
 Metabolism - General metabolism and metabolic pathways 13002

IT Major Concepts  
 Foods

IT Chemicals & Biochemicals  
 ascorbic acid: anti-browning effect; citric acid: anti-browning effect; sodium chloride: anti-browning effect

IT Methods & Equipment  
 freezing: food preservation method; storage: food storage method; thawing: food processing method

IT Miscellaneous Descriptors  
 annona puree: enzymatic browning, vegetable product

ORGN Classifier  
 Annonaceae 25575  
 Super Taxa  
 Dicotyledones; Angiospermae; Spermatophyta; Plantae  
 Organism Name  
 Annona-chirimola [cherimoya]  
 Taxa Notes  
 Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants

RN 50-81-7Q (ascorbic acid)  
 62624-30-0Q (ascorbic acid)  
 77-92-9 (citric acid)  
 7647-14-5 (sodium chloride)

L91 ANSWER 32 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1997:452766 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV199799751969  
 TITLE: Comparative study and polyphenol oxidase inhibitors efficacy with sulphite treatment prior to dehydration of apples produced in northern area of Pakistan.  
 AUTHOR(S): Alizai, Mohammad Nisar Khan; Ahmad, Zulfiqar  
 CORPORATE SOURCE: Pakistan Council Sci. Ind. Res. Lab., Peshawar, Pakistan  
 SOURCE: Sarhad Journal of Agriculture, (1997) Vol. 13, No. 3, pp. 303-310.  
 ISSN: 1016-4383.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 27 Oct 1997  
 Last Updated on STN: 27 Oct 1997

AB Methodology with modified techniques have been developed for village level sun-dried apples using polyphenol oxidase inhibitors combination along with sulphite to monitor the efficacy of the treatments. Control of browning in apples during sun drying has been investigated in view of its healthy crispy look to enhance shelf life of the product.

CC Food technology - Fruits, nuts and vegetables 13504  
 Food technology - Evaluations of physical and chemical properties 13530  
 Food technology - Preparation, processing and storage 13532

IT Major Concepts  
 Foods

IT Chemicals & Biochemicals  
 POLYPHENOL OXIDASE; SULPHITE; SULFITE; ASCORBIC ACID; BENZOATE

IT Miscellaneous Descriptors  
 ASCORBIC ACID; BENZOATE; FOOD PRESERVATION METHOD; FOODS; FRUIT; ORIENTAL REGION; POLYPHENOL OXIDASE INHIBITOR; SULFITE TREATMENT

GT Pakistan (Asia; Oriental region)



## ORGN Classifier

Rosaceae 26675

## Super Taxa

Dicotyledones; Angiospermae; Spermatophyta; Plantae

## Organism Name

apple

## Taxa Notes

Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants

RN 9002-10-2 (POLYPHENOL OXIDASE)

14265-45-3 (SULPHITE)

14265-45-3 (SULFITE)

50-81-7Q (ASCORBIC ACID)

62624-30-0Q (ASCORBIC ACID)

766-76-7 (BENZOATE)

L91 ANSWER 33 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1997:41972 BIOSIS Full-text

DOCUMENT NUMBER: PREV199799333960

TITLE: Preservation of banana pulp by combined methods.

AUTHOR(S): Vicente, I.; Sevillano, E.; Garcia, A.; Fernandez, M.; Castro, D.

CORPORATE SOURCE: Inst. Invest. Ind. Alimentaria, Ciudad de La Habana, Cuba

SOURCE: Alimentaria, (1996) Vol. 34, No. 276, pp. 55-59.

CODEN: ALMNEC. ISSN: 0300-5755.

DOCUMENT TYPE: Article

LANGUAGE: Spanish

ENTRY DATE: Entered STN: 28 Jan 1997

Last Updated on STN: 28 Jan 1997

AB A preservation process to obtain a seven-months shelf-stable banana puree was carried out. Processing control includes: pH reduction down to 3.6 using phosphoric acid, water activity reduction down to 0.94 using sucrose; addition of potassium sorbate and sodium metabisulfite (1200 and 400 ppm of active SO<sub>2</sub>, respectively) and a mild heat treatment. At the end of storage banana pulp developed browning and of flavors. At the same time additives degraded and micro organisms started to grow.

CC Biochemistry studies - General 10060

Food technology - General and methods 13502

IT Major Concepts

Biochemistry and Molecular Biophysics; Foods

IT Chemicals &amp; Biochemicals

PHOSPHORIC ACID; SUCROSE; POTASSIUM SORBATE; SODIUM METABISULFITE

IT Miscellaneous Descriptors

BANANA PULP; BANANA PUREE; BROWNING; FOOD

PRESERVATION; FOODS; HEAT TREATMENT; METHODOLOGY; PH;

PHOSPHORIC ACID; POTASSIUM SORBATE; PRESERVATION METHOD; SODIUM METABISULFITE; SUCROSE; WATER ACTIVITY

RN 7664-38-2 (PHOSPHORIC ACID)

57-50-1 (SUCROSE)

24634-61-5 (POTASSIUM SORBATE)

7681-57-4 (SODIUM METABISULFITE)

L91 ANSWER 34 OF 39 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:360626 BIOSIS Full-text

DOCUMENT NUMBER: PREV199598374926

TITLE: Diffusion of citric and ascorbic acids in pre-peeled potatoes and their influence on microbial growth during refrigerated storage.

AUTHOR(S): Giannuzzi, Leda; Lombardi, Alejandra M.; Zaritzky, Noemi E.

[Reprint author]  
 CORPORATE SOURCE: Dep. Ingenieria Quim., Fac. Ingenieria, Univ. Nac. La Plata, La Plata, Argentina  
 SOURCE: Journal of the Science of Food and Agriculture, (1995) Vol. 68; No. 3, pp. 311-317.  
 CODEN: JSFAAE. ISSN: 0022-5142.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 30 Aug 1995

Last Updated on STN: 30 Aug 1995

AB The most common chemical preservatives used to inhibit both enzymatic browning and microbial growth in pre-peeled potatoes are sodium sulphite and bisulphite. Since 1987 the FDA has limited their use as food ingredients; consequently, during recent years the tendency to replace sulphites by GRAS chemical additives such as citric and ascorbic acids has become stronger. In the present work, surface colour variations, exudate production and microbial growth were analysed on pre-peeled potatoes treated with citric and ascorbic acids. These preservatives were applied individually and as mixtures; shelf-life was extended and microbiologically safe products were obtained. Mathematical models were solved to analyse the diffusion of these acids during immersion and storage periods in order to determine the concentration profiles within the product and to predict the surface concentration to which the microorganisms are exposed.

CC Methods - Laboratory methods 01004  
 Mathematical biology and statistical methods 04500  
 Comparative biochemistry 10010  
 Biochemistry methods - General 10050  
 Biochemistry methods - Minerals 10059  
 Biochemistry studies - General 10060  
 Biochemistry studies - Minerals 10069  
 Biophysics - General 10502  
 Biophysics - Methods and techniques 10504  
 Movement 12100  
 Food technology - Fruits, nuts and vegetables 13504  
 Food technology - Evaluations of physical and chemical properties 13530  
 Food technology - Preparation, processing and storage 13532  
 Microorganisms - General 29500  
 Microbiological apparatus, methods and media 32000  
 Public health: microbiology - Public health microbiology 37400  
 Food microbiology - Food and beverage spoilage and contamination 39002  
 Disinfection, disinfectants and sterilization - 39500  
 Plant physiology - Chemical constituents 51522

IT Major Concepts  
 Biochemistry and Molecular Biophysics; Foods; Mathematical Biology  
 (Computational Biology); Methods and Techniques; Microbiology;  
 Pharmacology

IT Chemicals & Biochemicals  
 ASCORBIC ACIDS

IT Miscellaneous Descriptors  
 CHEMICAL ADDITIVES; FOOD COLOR; FOOD INGREDIENTS; FOOD  
 PRESERVATIVES; FOOD PROCESSING; FOOD PRODUCTS; FOOD STORAGE;  
 MATHEMATICAL MODEL; METHODS; SHELF LIFE

ORGN Classifier

Angiospermae 25200

Super Taxa

Spermatophyta; Plantae

Organism Name

vegetable

Taxa Notes

Angiosperms, Plants, Spermatophytes, Vascular Plants

ORGN Classifier  
 Microorganisms 01000  
 Super Taxa  
 Microorganisms  
 Organism Name  
 microorganism  
 microorganisms  
 Taxa Notes  
 Microorganisms

RN 50-81-7QD (ASCORBIC ACIDS)  
 62624-30-0QD (ASCORBIC ACIDS)

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ACCESSION NUMBER: 1990:283902 BIOSIS Full-text

DOCUMENT NUMBER: PREV199090014748; BA90:14748

TITLE: DETERMINATION OF ASCORBIC ACID DEHYDROASCORBIC ACID AND  
 ASCORBIC ACID-2-PHOSPHATE IN INFILTRATED APPLE AND POTATO  
 TISSUE BY HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY.

AUTHOR(S): SAPERS G M [Reprint author]; DOUGLAS F W JR; ZIOLKOWSKI M  
 A; MILLER R L; HICKS K B

CORPORATE SOURCE: EASTERN REGIONAL RES CENTER, AGRIC RES SERVICE, US DEP  
 AGRIC, 600 EAST MERMAID LANE, PHILADELPHIA, PA 19118, USA

SOURCE: Journal of Chromatography, (1990) Vol. 503, No.  
 2, pp. 431-436.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: ENGLISH

ENTRY DATE: Entered STN: 23 Jun 1990

Last Updated on STN: 7 Aug 1990

AB A high-performance liquid chromatography procedure for the determination of  
 ascorbic acid-2-phosphate (AAP), ascorbic acid (AA), and dehydroascorbic acid  
 (DHAA) in raw apple and potato, treated with AAP and AA to prevent browning,  
 was developed. These compounds were extracted with a mixture of mobile phase  
 and 2.5% metaphosphoric acid and separated on an aminopropyl bonded-phase  
 silica column. DHAA was determined as AA following reduction with  
 dithiothreitol. The method was evaluated with spiked samples and found to be  
 accurate and reproducible at concentrations as high as 0.9 mM AA or AAP.

CC Biochemistry methods - Vitamins 10053

Biochemistry studies - Vitamins 10063

Biophysics - Methods and techniques 10504

Food technology - Evaluations of physical and chemical properties 13530

Food technology - Synthetic, supplemental and enrichment foods 13534

IT Major Concepts

Biochemistry and Molecular Biophysics; Foods; Methods and Techniques

IT Miscellaneous Descriptors

FOOD PRESERVATIVE

ORGN Classifier

Rosaceae 26675

Super Taxa

Dicotyledones; Angiospermae; Spermatophyta; Plantae

Taxa Notes

Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants

ORGN Classifier

Solanaceae 26775

Super Taxa

Dicotyledones; Angiospermae; Spermatophyta; Plantae

Taxa Notes

Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants

RN 50-81-7Q (ASCORBIC ACID)

62624-30-0Q (ASCORBIC ACID)  
 490-83-5Q (DEHYDROASCORBIC ACID)  
 33124-69-5Q (DEHYDROASCORBIC ACID)  
 23313-12-4 (ASCORBIC ACID-2-PHOSPHATE)

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ACCESSION NUMBER: 1986:53103 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV198630053103; BR30:53103  
 TITLE: PROCESS FOR BANANA PUREE PRESERVATION AT RURAL LEVEL.  
 AUTHOR(S): GARCIA R [Reprint author]; DE ARRIOLA M C; DE PORRES E;  
 ROLZ C  
 CORPORATE SOURCE: APPLIED RES DIV, CENTRAL AMERICAN RES INST FOR IND, ICAITI,  
 PO BOX 1552, GUATEMALA, GUATEMALA  
 SOURCE: Lebensmittel-Wissenschaft and Technologie, (1985)  
 Vol. 18, No. 5, pp. 323-327.  
 CODEN: LBWTAP. ISSN: 0023-6438.  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: BR  
 LANGUAGE: ENGLISH  
 ENTRY DATE: Entered STN: 25 Apr 1986  
 Last Updated on STN: 25 Apr 1986

CC Biochemistry - Gases 10012  
 Biochemistry studies - General 10060  
 Food technology - Fruits, nuts and vegetables 13504  
 Food technology - Evaluations of physical and chemical properties 13530  
 Food technology - Preparation, processing and storage 13532  
 Temperature - General measurement and methods 23001  
 Food microbiology - Food and beverage spoilage and contamination 39002  
 Disinfection, disinfectants and sterilization - 39500  
 IT Major Concepts  
 Foods; Methods and Techniques; Pharmacology  
 IT Miscellaneous Descriptors  
 CITRIC-ACID SORBATE BENZOATE SULFUR DIOXIDE BROWNING  
 PREVENTION FOOD PROCESSING FOOD PRESERVATIVES  
 THERMAL INACTIVATION  
 RN 77-92-9 (CITRIC-ACID)  
 72138-88-6 (SORBATE)  
 766-76-7 (BENZOATE)  
 7446-09-5 (SULFUR DIOXIDE)

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ACCESSION NUMBER: 1946:18206 BIOSIS Full-text  
 DOCUMENT NUMBER: PREV19462000018349; BA20:18349  
 TITLE: Physiology of citrus fruits in storage.  
 AUTHOR(S): Miller, Erston V.  
 SOURCE: BOT REV, (1946) Vol. 12-27, No. 7-4, pp. 393-423,  
 6-8, 20-22.  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: BA  
 LANGUAGE: Unavailable  
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AB As citrus fruits mature there is an increase in size, weight, volume of juice,  
 and a change from green to yellow color in the rind. There occurs a gradual  
 increase in total soluble solids, and a decrease in total acids. There occurs  
 a slight decrease in mg. of ascorbic acid per ml. of juice, due to increase in  
 juice volume, but this appears as an increase when expressed as mg. per  
 individual fruit. Citrus fruits are unlike some fruits in that they do not

ripen after removal from the tree. If held too long at relatively high temps., citrus fruits may be attacked by decay-producing organisms or they may undergo physical and chemical changes which render them unattractive, or less palatable and less nutritious because of loss of solids, acids, and other compounds which impart flavor and aroma to them. Retarding of these changes is accomplished by holding in cold or cool storage. Recommended temps. for storage are: Grapefruit, 45[degree] to 55[degree] F in regions where stem-end decay is not a factor, but 32 [degree] where liability to this decay may shorten the storage life; oranges, 34[degree] to 38[degree]; lemons, 55[degree] to 58[degree]; and limes, 45[degree]-48[degree] F. There have been reports indicating that cold storage has improved the flavor of grapefruit by causing a reduction in the quantity of the bitter principle known as naringin. On the other hand, too long storage at certain temps. may produce physiol. disorders such as aging, brown stain or scald, pitting, watery breakdown, albedo browning, membranous stain, peteca, and red blotch. Some of the factors that have been reported to predispose citrus fruits to these low-temperature injuries are: a high % of potash in the fertilizer, a relatively high content of moisture and organic matter in the soil, the susceptibility of specific vars., harvesting fruit following relatively high mean temps., storing fruit from the outside branches of the tree or fruit that is physiologically immature, processing in the packing house, and low rel. humidity in the storage rooms. Methods reported by research workers for reducing the amount of physiol. disorders in storage consist of delayed storage, application of waxes and wrappers to the fruits, and exposure to CO<sub>2</sub>. Rate of respiration in citrus fruits is generally a little lower than that of most fruits and vegetables. However, citrus fruits are like some of the other fruit's in that following maturity they attain a respirational "climacteric", after which they go into senescence. The onset of senescence in citrus fruits has been delayed by storing them prior to the incidence of the climacteric, and the life in cold storage thus extended, although some evidence has been reported suggesting that the development of the climacteric in storage accelerates the production of physiol. disorders. Prolonged storage of citrus fruits in relatively high percentages of CO<sub>2</sub> has usually resulted in rind injury or in a deleterious effect on flavor. Investigators reporting success with CO<sub>2</sub> storage of citrus fruits have employed moderate percentages of the gas (10-15%). There is some evidence that a very brief treatment with high percentages of CO<sub>2</sub> reduces the amount of some of the physiol. disorders subsequently developing in cold storage, but on the whole the CO<sub>2</sub> storage of citrus fruits is still in the exptl. stage. Ethylene gas, which is often employed commercially for "coloring or degreening citrus fruits, removes the green pigment (chlorophyll) from the rinds of the fruit but does not measurably affect the solids, acids, and vitamin C in the juice. However, ethylene stimulates respiration, causes the stem buttons to be released, produces certain changes in pectic substances, and appears to accelerate the development of rind breakdown and decay. The increase in decay in ethylene-treated fruit may be due either to chemical disintegration of cell-wall materials, or to biol. stimulation of the decay-producing organisms, or to both. In recent yrs. citrus fruits, like other fruits, have been shown to evolve ethylene as one of the products of normal metabolism, and the evolution of this gas is more rapid in decaying fruits. ABSTRACT AUTHORS: E. V. Miller

CC Horticulture - Tropical, subtropical fruits and plantation crops 53004  
 IT Major Concepts  
     Horticulture (Agriculture)  
 IT Parts, Structures, & Systems of Organisms  
     hand; cell-wall  
 IT Chemicals & Biochemicals  
     naringin; vitamin C; fertilizer; Ethylene; pigment;  
     chlorophyll; ascorbic acid  
 ORGN Classifier

Angiospermae 25200  
 Super Taxa  
   Spermatophyta; Plantae  
 Organism Name  
   vegetables (common)  
 Taxa Notes  
   Angiosperms, Plants, Spermatophytes, Vascular Plants  
 ORGN Classifier  
   Organisms 00500  
 Super Taxa  
   Organisms  
 Organism Name  
   organisms (common)  
 Taxa Notes  
   Organisms  
 ORGN Classifier  
   Plantae 11000  
 Super Taxa  
   Plantae  
 Organism Name  
   plant (common)  
 Taxa Notes  
   Plants  
 ORGN Classifier  
   Rutaceae 26685  
 Super Taxa  
   Dicotyledones; Angiospermae; Spermatophyta; Plantae  
 Organism Name  
   Citrus (genus)  
   lemons (common)  
   grapefruit (common)  
   limes (common)  
   oranges (common)  
   citrus (common)  
 Taxa Notes  
   Angiosperms, Dicots, Plants, Spermatophytes, Vascular Plants  
 RN 10236-47-2 (naringin)  
   50-81-7 (vitamin C)  
   62624-30-0 (ascorbic acid)  
  
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     Item deleted - false hit  
  
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   STN  
     Item deleted - false hit

=> d his nofile

(FILE 'HOME' ENTERED AT 15:09:38 ON 29 AUG 2007)

FILE 'HCAPLUS' ENTERED AT 15:09:47 ON 29 AUG 2007

L1 1 SEA ABB=ON PLU=ON US20040175447/PN  
D ALL  
SEL RN

FILE 'REGISTRY' ENTERED AT 15:11:31 ON 29 AUG 2007

L2 23 SEA ABB=ON PLU=ON (4373-41-5/BI OR 472-15-1/BI OR 473-98-3/BI  
OR 545-46-0/BI OR 545-48-2/BI OR 77-52-1/BI OR 110-54-3/BI OR  
1406-18-4/BI OR 14265-44-2/BI OR 1721-69-3/BI OR 189384-88-1/BI  
OR 1896-77-1/BI OR 25089-87-6/BI OR 364062-05-5/BI OR  
364062-06-6/BI OR 364062-07-7/BI OR 50-81-7/BI OR 6089-92-5/BI  
OR 64-17-5/BI OR 68-04-2/BI OR 7664-38-2/BI OR 77-92-9/BI OR  
86176-79-6/BI)

FILE 'ZCAPLUS' ENTERED AT 15:11:45 ON 29 AUG 2007

L3 QUE ABB=ON PLU=ON TRITERPENE#  
L4 QUE ABB=ON PLU=ON PENTACYCLIC TRITERPENE#  
L5 QUE ABB=ON PLU=ON MASLINIC ACID OR URSOLIC ACID  
L6 QUE ABB=ON PLU=ON PREVENT? OR REDUC? OR INHIBIT? OR BLOCK?  
OR STOP?  
L7 QUE ABB=ON PLU=ON MELANIN  
L8 QUE ABB=ON PLU=ON MELANIN (2A) PRODUCING OR PRODUCTION OR  
FORMULAT?  
L9 QUE ABB=ON PLU=ON BLACKEN? OR BROWNING?  
L10 QUE ABB=ON PLU=ON (MELANOGENE? OR BLACKEN? OR BROWN?) (2A)  
(INHIBIT? OR AGENT# OR FORMUL? OR COMPOSIT?)  
L11 QUE ABB=ON PLU=ON FEED# OR FERTILIZER#  
L12 QUE ABB=ON PLU=ON FOOD PRESERV?  
L13 QUE ABB=ON PLU=ON MURANO YOSHIHIRO/AU  
L14 QUE ABB=ON PLU=ON SHINOHARA GOU/AU  
L15 QUE ABB=ON PLU=ON KUNO NORIYASU/AU  
L16 QUE ABB=ON PLU=ON AY<2003 OR PY<2003 OR PRY<2003

FILE 'HCAPLUS' ENTERED AT 15:21:48 ON 29 AUG 2007

L17 522958 SEA ABB=ON PLU=ON L2  
L18 2733 SEA ABB=ON PLU=ON L4 OR L5  
L19 1876 SEA ABB=ON PLU=ON L6 (P) L7  
L20 5 SEA ABB=ON PLU=ON L18 AND L19  
L21 607673 SEA ABB=ON PLU=ON 17/SX,SC  
L22 99 SEA ABB=ON PLU=ON L19 AND L21  
L23 9 SEA ABB=ON PLU=ON L22 AND L11  
D SCAN

FILE 'HCAPLUS' ENTERED AT 15:29:44 ON 29 AUG 2007

L24 1 SEA ABB=ON PLU=ON L4 (P) L10  
D TI  
L25 15934 SEA ABB=ON PLU=ON (L3 OR L4 OR L5)  
L26 11 SEA ABB=ON PLU=ON L25 AND L19  
L27 1 SEA ABB=ON PLU=ON L26 AND (L11 OR L12)  
D TI  
L28 1654 SEA ABB=ON PLU=ON L6 (L) L9  
L29 449 SEA ABB=ON PLU=ON ((L2 OR L3 OR L4 OR L5)) AND L28  
L30 353 SEA ABB=ON PLU=ON L29 AND L21  
L31 48 SEA ABB=ON PLU=ON L30 (P) (L11 OR L12)

10/804157

L32 3 SEA ABB=ON PLU=ON L31 (P) (L7 OR L8)  
 L33 3 SEA ABB=ON PLU=ON L32 (L) (L7 OR L8)  
 L34 1 SEA ABB=ON PLU=ON L31 AND L7  
       D SCAN L33 TI HIT  
       D QUE L26  
 L35 21 SEA ABB=ON PLU=ON L23 OR L26 OR L33  
 L36 10 SEA ABB=ON PLU=ON L35 AND L16  
 L37 2 SEA ABB=ON PLU=ON L36 AND L12  
 L38 6 SEA ABB=ON PLU=ON L36 AND L21  
 L39 6 SEA ABB=ON PLU=ON L37 OR L38  
       SAVE TEMP L39 HOF157HCAP/A  
 L40 7 SEA ABB=ON PLU=ON MURANO YOSHIHIRO/AU  
 L41 11 SEA ABB=ON PLU=ON SHINOHARA GOU/AU  
 L42 19 SEA ABB=ON PLU=ON KUNO NORIYASU/AU  
 L43 26 SEA ABB=ON PLU=ON (L40 OR L41 OR L42)  
 L44 1 SEA ABB=ON PLU=ON L40 AND (L41 OR L42)  
 L45 10 SEA ABB=ON PLU=ON L41 AND L42  
 L46 10 SEA ABB=ON PLU=ON L44 OR L45  
 L47 7 SEA ABB=ON PLU=ON L43 AND L21  
 L48 1 SEA ABB=ON PLU=ON L43 AND (L11 OR L12)  
 L49 13 SEA ABB=ON PLU=ON (L46 OR L47 OR L48)  
 L50 12 SEA ABB=ON PLU=ON L49 NOT L1  
 L51 12 SEA ABB=ON PLU=ON L50 NOT L39  
       SAVE TEMP L51 HOF157HCAIN/A

FILE 'JAPIO' ENTERED AT 15:42:34 ON 29 AUG 2007

L52 0 SEA ABB=ON PLU=ON L18 AND L19  
 L53 0 SEA ABB=ON PLU=ON L4 (P) L10  
 L54 66 SEA ABB=ON PLU=ON L3 (P) L6  
 L55 11 SEA ABB=ON PLU=ON L54 AND (L7 OR L8)  
       D SCAN

FILE 'JAPIO' ENTERED AT 15:45:47 ON 29 AUG 2007

L56 1 SEA ABB=ON PLU=ON L55 AND (L11 OR L12)  
       D TI  
       SAVE L56 TEMP HOF157JAPIO/A  
 L57 42 SEA ABB=ON PLU=ON (L40 OR L41 OR L42)  
 L58 0 SEA ABB=ON PLU=ON L41 AND L42  
 L59 1 SEA ABB=ON PLU=ON L57 AND L7  
 L60 0 SEA ABB=ON PLU=ON L57 AND (L11 OR L12)  
 L61 0 SEA ABB=ON PLU=ON L59 AND ((L3 OR L4 OR L5))  
 L62 1 SEA ABB=ON PLU=ON L19 AND L57  
 L63 0 SEA ABB=ON PLU=ON (L9 OR L10) AND L57  
 L64 1 SEA ABB=ON PLU=ON L59 OR L62  
       SAVE TEMP L64 HOF157JAPIN/A

FILE 'AGRICOLA, CABA, BIOSIS, SCISEARCH, PASCAL' ENTERED AT 15:51:31 ON 29 AUG 2007

L65 3 SEA ABB=ON PLU=ON L20  
       D TRIAL  
 L66 5 SEA ABB=ON PLU=ON L26  
       D TRIAL  
 L67 5 SEA ABB=ON PLU=ON L65 OR L66  
 L68 0 SEA ABB=ON PLU=ON L67 AND (L11 OR L12)  
 L69 31859 SEA ABB=ON PLU=ON L19 OR L9 OR L10  
 L70 1026 SEA ABB=ON PLU=ON L69 AND (L11 OR L12)  
 L71 0 SEA ABB=ON PLU=ON L70 AND ((L3 OR L4 OR L5))  
       D TI KWIC L66 1-5

FILE 'STNGUIDE' ENTERED AT 15:59:57 ON 29 AUG 2007



10/804157

FILE 'AGRICOLA, CABA, BIOSIS, SCISEARCH, PASCAL' ENTERED AT 16:01:02 ON  
29 AUG 2007

L72 8388 SEA ABB=ON PLU=ON L6 (P) L9  
L73 0 SEA ABB=ON PLU=ON (L18 OR L3) AND L72  
L74 779 SEA ABB=ON PLU=ON L29  
L75 62 SEA ABB=ON PLU=ON L74 AND (L11 OR L12)  
L76 34 SEA ABB=ON PLU=ON L75 AND L16  
L77 0 SEA ABB=ON PLU=ON L76 AND L19  
L78 34 SEA ABB=ON PLU=ON L76 AND ((L7 OR L8 OR L9 OR L10))  
L79 32 DUP REM L78 (2 DUPLICATES REMOVED)  
ANSWERS '1-8' FROM FILE AGRICOLA  
ANSWERS '9-19' FROM FILE CABA  
ANSWERS '20-32' FROM FILE BIOSIS  
L80 0 SEA ABB=ON PLU=ON L79 AND ((L3 OR L4 OR L5))  
L81 34 SEA ABB=ON PLU=ON L78 (P) L9  
D SCAN TI L79

FILE 'STNGUIDE' ENTERED AT 16:15:11 ON 29 AUG 2007

FILE 'AGRICOLA, CABA, BIOSIS, SCISEARCH, PASCAL' ENTERED AT 16:17:13 ON  
29 AUG 2007

L82 32 SEA ABB=ON PLU=ON L79 AND (PY<2005 OR AY<2005 OR PRY<2005)  
L83 19303 SEA ABB=ON PLU=ON TRITERPENE#  
L84 0 SEA ABB=ON PLU=ON L82 AND L83  
L85 0 SEA ABB=ON PLU=ON L82 (3A) L83  
L86 32 SEA ABB=ON PLU=ON L82 AND (L8 OR L9 OR L10)  
SAVE L86 HOF157MULTI/A  
L87 3 SEA ABB=ON PLU=ON L43  
L88 1 SEA ABB=ON PLU=ON L46  
L89 3 SEA ABB=ON PLU=ON L87 OR L88  
SAVE L89 HOF157MULTIN/A

FILE 'STNGUIDE' ENTERED AT 16:28:02 ON 29 AUG 2007

D COST  
D QUE L51  
D QUE L64  
D QUE L89

FILE 'HCAPLUS, JAPIO, BIOSIS, PASCAL' ENTERED AT 16:29:49 ON 29 AUG 2007

L90 16 DUP REM L51 L64 L89 (0 DUPLICATES REMOVED)  
ANSWERS '1-12' FROM FILE HCAPLUS  
ANSWER '13' FROM FILE JAPIO  
ANSWERS '14-15' FROM FILE BIOSIS  
ANSWER '16' FROM FILE PASCAL  
D 1-16 IBIB AB  
D QUE L39  
D QUE L56  
D QUE L86

FILE 'HCAPLUS, JAPIO, AGRICOLA, CABA, BIOSIS' ENTERED AT 16:31:55 ON 29  
AUG 2007

L91 39 DUP REM L39 L56 L86 (0 DUPLICATES REMOVED)  
ANSWERS '1-6' FROM FILE HCAPLUS  
ANSWER '7' FROM FILE JAPIO  
ANSWERS '8-15' FROM FILE AGRICOLA  
ANSWERS '16-26' FROM FILE CABA  
ANSWERS '27-39' FROM FILE BIOSIS  
D 1-6 IBIB ED AB HITIND  
D 7-39 IBIB AB HITIND